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UNRESOLVED PROBLEMS IN GEOGRAPHICAL NOMENCLATURE

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Difficulties of geographical nomenclature which we now feel acutely were clearly set forth in the introduction to the first volume of *A New General Collection of Voyages and Travels* published in four volumes, in London, by Thomas Astley two hundred years ago (1745-7). The fundamental assumptions of the anonymous editor of this work (who laid down most enlightened principles of nomenclature), that foreign names can be reduced to English form, and that a high degree of uniformity is attainable in English usage, are worth examining in the light of experience gained since his time.

It is to be noted at once that, although Astley's collection of voyages was an influential work in the eighteenth century, few of the English spellings introduced by its editor have survived. His Kanton, Kayro, Kongo, Mekka, Sokotra, etc., have not prevailed over Canton, Cairo, Congo, Mecca, Socotra, etc. The P.C.G.N. [Permanent Committee on Geographical Names for British Official Use], in its general lists of African, Asiatic and European names (all work of its earlier years), also attempted to introduce a number of supposedly English spellings, such as Benkulen (for Benkoelen), Chilachap (Tjilatjap), Godome (Godomey), Kakaray (Cacaray), Kalagwa (Calaguas), Kalayan (Calayan), Capiz (Kapiz), Konakri (Conakry), Kupang (Koepang), Leyte (Leite), Nosi Be (Nosy Bé), Qnitra (Knitra), Salonika (Salonica), Sebu (Cebu), Warqla (Ouargla) ; but, in discriminating usage, the established English and foreign-official forms have not been displaced by the suggested innovations. The P.C.G.N. decisions in this respect were, indeed, somewhat arbitrary. Although Salonika was recommended, Sokotra was not.

The main inference to be drawn from the tacit public rejection of improved forms of accepted names, is that, for common use, the British public prefers the forms it knows and which are, in fact, part of the English language. It follows that the uniformity of usage which many, from Astley's editor to certain contemporary official authorities, have tried to establish, is unattainable in practice. English forms of non-English names are of limited currency outside England, and " the several various Readings of the

same Name " are therefore still " very necessary to be known by all Geographers and Historians, in order to discover the Identity of Places." It is important to understand why the use of one, supposedly correct, form of each geographical name is not practicable ; and then, to consider what measure of agreement is possible, both amongst ourselves and with foreign nations.

The limits of the earth (its poles, circumference, hemispheres and zones) ; the parts of the world (its oceans and continents, seas and countries, parts of seas and parts of countries ; its principal lakes, rivers, mountains ; its peoples and languages, its capital cities and grander works of man), have names in the languages of all civilised nations. But it does not follow that a geographical unit recognised and named by one people will be recognised or named by another people. The Windward and Leeward Islands represent a geographically illogical subdivision of the Islas de Bárlovento of the Spaniards (or Eilanden Boven den Wind of the Dutch) ; and for the Islas de Sotavento of the Spaniards (or Eilanden Beneden den Wind of the Dutch) we now have no name.[1] Nor are our Lesser Antilles (the Pequeñas Antillas of the Spaniards) now the same as the Kleine Antillen of the Dutch. It follows that names of the same or similar meaning in different languages are not necessarily applied to the same things, and should not be equated unless they are so applied.

In parts of New Guinea people have names for all surrounding villages but none for their own. Peoples given to generalisation of statement will have names for many things not named at all by less advanced peoples. The Greeks recognise the structural relationships between a certain range, peninsula and promontory, by calling them Keravnia Ori, Akrokeravnia Ori, and Akrotirion Akrokeravniou, respectively ; but the Albanians, in whose country they now lie, have no corresponding sequence of names, though they have a name for every pass and summit of the chain. The name North-Albanian Alps is a useful English regional name ; but the highlands of northern Albania and neighbouring Yugoslavia are not recognised as a unit by Albanians and have no Albanian name. There are English names for many of the islands of Melanesia ; but there are few names for whole islands in the Melanesian languages themselves.[2] Many supposedly native names of Melanesian islands are merely the native names of parts of islands. Santa Maria, in the Banks islands, for example, is commonly supposed to be called Gaua by the natives, but Gaua to them is merely the name of the north-eastern part of the island in the language of that part of the island. The Polynesians, a more advanced people, have names for all their islands, but may not have names for groups of islands. I doubt that there is any name in Tahitian corresponding to Society islands, or in Hawaiian corresponding to Sandwich islands. It follows that the English name for any place or feature which has no native name needs no apology for its use in English.

The sailors of the maritime countries have spread names in their own languages, or names assimilated to their own languages, as far as their voyages have extended. There are English names commemorating English discovery all over the world. If applied to geographical features outside territorial limits nothing should displace such names from English use. Those applied, however, to features in country unclaimed or uninhabited

at the time of discovery, but now under foreign sovereignty, will survive in use abroad only at the discretion of the sovereign power. The Norwegians, for instance, have preserved the proper element in certain English names in Svalbard (*e.g.* Edgeøya), but have translated English names which have meaning (*e.g.* Bjørnøya).[3]

In England names of many other countries and of many well-known places and features in other countries have been reduced to an English pronunciation, and in many instances to an English spelling, by constant use. The English names for many places in Wales, Scotland and Ireland would not be used in Welsh, Gaelic or Irish speech, but Cardiff is more useful than the Welsh Caerdydd. Some of the English names of foreign places are very old. It would be hard indeed to say when such names as Russia, Spain, came into English use. Many of our names for places abroad represent strata of loan-words in the language, and the introduction of some of them was due, in less literate times, to war. Marlborough's campaigns probably gave us Oudenarde ; and the Crimean war gave us Sebastopol. Some English names of foreign places are not at once recognisable as English. Genua being Latin, Genova Italian, and Gènes French, Genoa is probably a genuine English form. Similarly, Genava being Latin (or Latinised Celtic), Ginevra Italian, and Genève French, Geneva is probably English. English names of places abroad have not yet been adequately studied, and it is likely that more exist than we suppose. The task of recognising and listing them awaits some student of linguistic geography.

Conventional Names

Although the official Irish is Baile Atha Cliath, Dublin is not, strictly speaking, an English name, but an English adaption of another Irish name ; and, although Schelde is Flemish, Scheldt is not an English form but an English use of the German form. These last two examples are of names used conventionally as English—that is, taken into English either from sources foreign to, or now rejected by, the places to which we apply them. Some of our names for places in nearer Germany, Switzerland, and northern Italy, for instance, are French. One has only to think of Aix la Chapelle, Cologne, Berne, Turin, etc. Similarly, many of our names for places in the Mediterranean parts of the Old World are Latin forms, or adaptions of Latin forms, of the ancient Greek names.

Conventional names, as a class, are at present somewhat misunderstood. Many would abolish their use in favour of the official names ; but many conventional names are extremely useful. In the first place, they fit naturally into our speech, for they come at once to mind and we can pronounce them all without hesitation. Secondly, those which apply to geographical features extended over more than one country, or to places where more than one language is spoken, save us from the embarrassment of choosing one of the several native names whenever we wish to speak of such a feature or place. The Danube is Donau in German, Dunaj in Czech, Duna in Hungarian, Dunav in Serbo-Croat and Bulgarian, and Dunareă in Romanian. Our conventional name Danube, which is the French form of the Latin Danubius, is more useful to us than any of the foreign forms of the name used in the countries through which the river flows. Thirdly,

conventional names may survive changes of government, and even of sovereignty.

In 1937 the P.C.G.N. decided, provisionally, to discourage the use of conventional names in favour of 'local official' forms of foreign names. This decision has given great difficulty to the Committee's Secretariat, partly because it is not practicable to reject the use of established forms of names from Spoken English, and partly because it is often very doubtful which, of possible choices, would be the best foreign form of a name for a particular purpose. Experience has now shown that our conventional names have a legitimate place in Spoken English, and that the trouble supposed to be caused by their use in English context was over-estimated. The conventional names in English use are limited in number ; and they apply mainly to prominent places and features. Their proper use can be regulated very simply in practice.

Attempts to improve established conventional names merely add to the confusion of geographical nomenclature. Up to the end of last century many parts of, and places in, Greece and its region were conventionally known to us under the Latin forms of the ancient names, and modern Greek names were written more or less phonetically. These practices were established by Leake, early in the nineteenth century, and were very satisfactory. At the turn of the century, however, there was a movement in favour of an improved transliteration of Greek names, which affected some of our established conventional names to their disadvantage. An island between Greece and western Crete has long been conventionally known to us by the Italian name of Cerigo and the Latinised ancient Greek name of Cythera. The new movement, which seems to have proceeded without conviction, gave us Kythera, which compromises between ancient and modern Greek. A better modernised form would have been Kithira ; but Kythera is both unnecessary and confusing. This movement to modify the transliteration of Greek should not be confounded with the movement to render foreign names in English spelling.[4]

Like some English names of foreign places, some conventional names may not be readily recognised for what they are. Cologne, for instance, is conventional not because it is French for Köln, but simply because it is French. It is not a French adaption of Köln, for both Köln and Cologne are direct descendants from the Latin Colonia, the one by the German, the other by the French line. It is very likely that many supposedly native names will prove, on strict examination, to be really conventional. The example of Gaua, given above, is by no means an isolated one. Again, like English names of places abroad, names in conventional English use have not yet been systematically studied, nor even properly listed. But they are more numerous than many suppose them to be.

In countries in which one language only is spoken, different elements of a population may use different names, even to different conventional names, for the same thing ; and, as the respective elements may rarely mix, neither may be disposed to change its natural habit in the interests of national consistency. Greek sailors, for example, have names for the prominent features of Greek geography, even to the winds of the Greek region, which are different from those used by Greek landsmen. It is not possible to say of such alternatives that one is right, the other wrong.

In a given country, geographical names may be rendered in different forms by different authorities, or even by the same authority. On pages 12 and 13 of the current (twelfth) edition of *The Channel Pilot, Part* 1, the Admiralty has used the forms Dover Strait, Dover strait, and Strait of Dover, for a feature which our newspapers almost invariably call the Straits of Dover. Cape Town is the form used by the Department of the Interior in South Africa, but the City Hall at Cape Town nevertheless uses the form Capetown. Even in a country geographically so well ordered as France, the name of a place may be written in one way by the postal authorities, but in another by the railway authorities. The amount of disagreement between authorities, both official and unofficial, concerning the forms of geographical names is fully appreciated only by those who have to work closely with the large-scale maps and charts, the atlases, books, reports, and articles in journals, from which the choice of an appropriate form for a foreign geographical name has so often to be made. Nor is the disagreement confined to the names of well-known places and features, of which so many also have conventional names. The countless names of obscure places and minor features, any of which may become important on a War Office map or an Admiralty chart, are rendered, even by highly organised countries, with an inconsistency of which few but cartographers are aware.

In countries or regions in which more than one language is spoken, or in which rival dialects of one language contend for supremacy, there may be conflict between official and native (or local) usage. Two Russian cities officially known as Kharkov and Kiev are called Kharkiv and Kiiv by natives. The town of Valona, officially called Vlonë in Albania, is called Vlorë in the local Tosk dialect. Many of the difficulties of 'colonial' nomenclature are expressed by this conflict between official and local usage. So successfully has the conflict been hidden from us by the familiar use of conventional names, for example, in our dealings with India, that the British public knows very little about the native forms of Indian place-names. The P.C.G.N. *First General List of Names in the Empire of India* gives no particulars about the languages to which the listed forms belong. Yet the future may exact from us a greater precision in the use of names for places in India, and Africa, than we now observe.

The same native language may be spoken in territory divided between several powers. The official forms of similar geographical names will then reflect the national usage of those powers. Malay is written in one way in British possessions in the East Indies, but in a different way in Dutch possessions. Arab and Malay sailors have carried Arabic and Malay names far beyond the confines of Arabia and Malaya. In the East Indian archipelago the conventional Malay names of many important features, being of wide currency, are of more use to seamen (though not to landsmen) than the local, native names. Both need to be known. Of many of the Malay names long-established English forms exist, but some of them are being replaced on British charts by the corresponding Dutch forms, while others, which were not accepted by the Dutch, are disappearing from our charts. The loss of a name such as Serwatty islands is regrettable. I suggest that no name in English *conventional* use should ever be replaced by a name officially in foreign *conventional* use. The Dutch forms of strictly native

names in Dutch colonies we should certainly respect ; but our own conventions should not give way to foreign conventions.

Transliteration and Transcription of Names

We have so far dealt mainly with considerations which might affect the use of geographical names in speech, or, at the most, in languages so written as to give little inconvenience to English-speaking people. Many languages, however, although written in forms of the Roman alphabet, so render geographical names as to make them unpronounceable by English-speaking people who have not studied the languages to which they belong, or very difficult to reproduce in newspapers printed in English.

Here, in the British Isles, we might regard ourselves as being flanked by a concentric series of zones of foreign alphabets. The Dutch, Flemish and German alphabets are very like our own. The Scandinavian and most of the Romance languages all confront us with a few unfamiliar diacritical marks. So do Polish, Czech, Hungarian and Serbo-Croat ; and they also present us with familiar letters, such as *c*, used to carry values which they do not carry in English. Beyond this zone lie languages in unfamiliar alphabets, the Slavonic and Semitic languages in particular, from which geographical names have to be transliterated into some form of the Roman alphabet before they are at all intelligible to us. And beyond the Middle East are numerous Oriental languages, some of which are not written alphabetically at all, and have to be transcribed before we can make anything of them.

Forms of the Roman alphabet are not too forbidding for English-speaking people engaged upon specialised work, for Valašské Meziříčí is comprehensible to the eye although quite unpronounceable by those who know nothing of Czech. The acceptance of foreign geographical names officially written in foreign forms of the Roman alphabet is therefore rational for special purposes ; but the transliteration of the more difficult forms may be unavoidable for general purposes. Whether we write Niš or not, school children have to be told that it means Nish. Transliteration and transcription, unfortunately, are not simple operations.

Here we find, once again, that our present difficulties were perfectly understood and formulated in the eighteenth century. In the preface to the second edition of his book, *A Survey of the Turkish Empire* (London, 1799), W. Eton wrote :—

> " Where the orthography of names is established by long custom, we must, I suppose, continue to use it. . . . Where this is not the case, we must spell names as the natives do, if they make use of the Latin characters ; if they do not, we must either write their character, or make use of letters of our own alphabet that will produce, as near as possible, the same sounds ; or, without regard to the sounds that answer to their letters. I will not decide which method ought to be followed, or which is the real language of a people whose orthography is fixed, the oral or the written. I will only observe, that it is very difficult to render the principal sounds of one language by letters of another, not to mention modifications ; and this is particularly so of the English, whose vowels have a very uncertain pronounciation."

We do not yet use the English alphabet rationally, or even consistently. To transliterate or to transcribe into English, British authorities have therefore to establish a conventional use of the English letters. Two conventional alphabets are in British use for the rendering of geographical names, Hunter's alphabet in India,[5] and the R.G.S. II alphabet, used in the Crown colonies for the recording of names from native languages, and in the United Kingdom by H.M. Government for the transliteration of foreign names from non-Roman alphabets.[6] Learned bodies, unofficial authorities, and foreign governments are not obliged to follow British official procedure, and there are numerous systems in force for the transliteration and transcription of languages written in non-Roman alphabets and scripts. For the transliteration of Greek alone, there are about ten different British and American systems in use, and there is about the same number for Russian.

Nor are English-speaking peoples alone in their need for transliteration and transcription. Many Colonial governments have had to develop official systems for the transliteration of colonial languages, and in north Africa alone we therefore find the Arabic word for watercourse transliterated as ued (Spanish), oued (French), uadi (Italian), wadi (English). The relationships between language, territory, and government, discussed above, which may produce a variety of necessary forms of a geographical name, may all therefore be complicated by the considerations of script.

Transcription, as from Chinese, is usually on a sound-for-sound basis. Many Indian names have been written down by ear in Hunter's alphabet, rather than transliterated from the native alphabets. Letter-for-letter rendering, however, is common from languages written in non-Roman alphabets and has decided advantages ; but so also has sound-for-sound rendering from such alphabets, particularly if the languages concerned be not phonetically written. About transliteration there is considerable disagreement. A man interested, say, in reading the names of foreign vessels through a telescope, is likely to consider the mere length of words of great importance, and to want every character in the word rendered in the transliteration. A man interested in using a transliterated map in the country it represents may want the strictly local forms of the names given in a rendering which will make his pronunciation intelligible to natives. Such diverse requirements cannot be satisfied by one rigid system of orthography. The R.G.S. II alphabet, a British conventional alphabet which has been developed by a succession of authorities during the past two hundred years, is satisfactory for the rendering of foreign names in forms appropriate to maps and charts, from languages in which the neutral vowel, nasalised vowels, clicks, and the glottal stop, are not important. It is not fully adapted to the rendering of many names in the more precise forms they should take in technical texts and in gazetteers—that is, when removed from the context of localisation, on which the identification of places depends as much as it does on their names. But no attempt to improve the R.G.S. II alphabet should be made without the collaboration of phoneticians.[7]

All that has so far been said applies mainly to the contemporary names of places now in existence. But the names themselves change in the course of time, and the manner of writing languages, or at least of spelling words, is also subject to reform from time to time. So the number of names under

which a place has been known, or the number of forms in which its name has been written during the course of its history, must also be added to the possible varieties of a single name due to the geographical, political, and linguistic considerations already discussed.

Name and position being both necessary for the full identification of a place, the element of position cannot be excluded from a discussion on geographical names. But a social unit in a primitive community does not necessarily remain in one place. Some native villages in Africa, some villages in New Guinea, are moved from place to place fairly often. A satisfactory method of representing such movable centres has not yet been devised. Fixed centres are localised mainly in one of three ways : by geographical coördinates, by grid coördinates, or by direction and distance from easily recognised points of reference. In P.C.G.N. lists of names, which include only the more important geographical features and places in the countries to which they apply, and are produced mainly for the guidance of the general public, localisation is by direction and distance from administrative centres. In P.C.G.N. gazetteers, in which all ascertainable names are listed, and which are produced mainly to facilitate the official examination of large-scale foreign maps and charts, geographical coördinates referred to the foreign official datum are given. To reduce them to Greenwich would impede rather than help direct work on foreign sheets.

Approach to Agreement upon Names

The possibility of national agreement upon the writing of geographical names would be increased were several simple but fundamental considerations kept always in mind :

First : The study of geographical names is mainly a study of proper names.

But proper names have been studied in few countries with the same thoroughness as common names, because they lack grammatical interest.

Second : Great care should be taken to ensure that names are properly recorded and reported from the source.

Some of the dissatisfaction which used to be expressed, for example, about Welsh names on English maps, may well have been due to conflicting results derived from the English system of collecting names in the field and from native appreciation of the Welsh classics and history. A short but valuable account of a satisfactory method of collecting names in a difficult area has just been contributed to *The Geographical Journal* by Colonel Clifford.

Third : Many so-called geographical names are not names at all, but are titles, dedications, descriptions, or merely locational references.

" Names " of these kind are nearly all translatable, since most of them consist of common nouns and adjectives. Most foreigners translate such English names (Neunzig Meilen Strand). Translation has, in many instances, much to recommend it. We ourselves turn the Italian " Golfo di Napoli " into " Bay of Naples " because the " golfo " at Naples corresponds better to the modern idea of a bay than to that of a gulf. The English hydrographic vocabulary being particularly rich and sensitive, the Admiralty prefers to substitute precise English terms for looser foreign terms in its rendering of foreign names. The translation of foreign names,

nevertheless, is not to be recommended as a general procedure. In a recent paper in the *Geografisk Tidsskrift* (1944-45, vol. 47) Johannes Humlum has pointed out how monotonous it would be were the names of all the Brown Mountains, Rapid Rivers, Blue Lakes, New Towns, etc. in the world translated into one language.

It is important, with regard to translatable names, to decide just how much is the name—that is, how much is it to be treated as proper—and then to endeavour to show it in writing. In such names as Straits of Dover and Straits of Gibraltar, the words Dover and Gibraltar alone distinguish the features from all other straits. To write them " straits of Dover " and " straits of Gibraltar " would usually suffice. Numerous " names which are no names " would then disappear from our lists ; but we would still find, in indexes, the entries " Dover " and " Dover, straits of." The test of how to index a doubtful compound name is often enough to show how much of it is proper. The French practice is to hyphenate the proper element, which gives such entries as " Calais, Pas de," and " Pas-de-Calais, Département du."

Fourth : Whether we like it or not, geographical names have to be considered from two opposed positions: that of our own language and that of the rest of the world.

In our own daily affairs we habitually use a large vocabulary of geographical proper names, some of which are purely English, others adapted to English use by various degrees of corruption (mispronunciation, partial translation, full translation, transcription, or transliteration), and others only conventionally English. They could be collected into an English geographical dictionary.

About the transcription and transliteration of foreign names originally recorded in scripts other than Roman, and in Roman alphabets other than the English, we are not in agreement. About the transliteration of colonial geographical names from native Roman alphabets we have not yet effectively thought.

The approach to international agreement would be made easier were a few similar considerations generally acknowledged.

First : There is no international language.

The proposal that the French spellings of geographical names be internationally accepted was rejected at the Fifth International Geographical Congress, held in Berne in 1891. The British Association has carefully considered the suitability of several linguistic media available for accessory use in science, but the notations of music, mathematics, chemistry, and telegraphy remain the only truly international intellectual vehicles. British and American descriptive names of features outside territorial limits have to be translated on the charts of all other maritime nations to make them intelligible to their seamen.

Second : Nations produce maps and charts for the sake, primarily, of national, not international, convenience.

Third : There is a great difference of tenacity between geographical proper names in the Old and the New World.

In countries of the Old World the names of places are so well worn to use as to be generally beyond the need of change. In those of the New World, on the other hand, the history of every name in the official language

is known, and the rapid development of some countries has led to inconveniences of nomenclature which it is appropriate to eliminate. But official measures suitable to a new country are not necessarily applicable to international difficulties.

Fourth : Were each nation to reduce its own geographical names to the best possible order, and then to produce official gazetteers for the territories in its possession, the sources of information would at least become clear.

Were each nation also to give the most widely accepted pronunciation of each name in International Phonetic Script, a continuous level of international understanding would at last have been established. This is not counsel of perfection, for the British Broadcasting Corporation has already shown, in its *Broadcast English* series, how much can be achieved.[8]

There is only one fully international authority for geographical names in existence, the Union Postale Universelle. It has recognised official names, or Romanised forms of them, as the forms most suitable for international use. But it is constrained to accept the Romanised forms in the Romanisations preferred by the adherent countries.

The International Geographical Congresses discussed international Romanisation actively but fruitlessly from 1871, and finally, in 1913, confessed failure by accepting the resolutions of the International Map Committee of 1909. That Committee had invited countries which use non-Roman script to develop their own official systems of Romanisation. A Roman alphabet for Turkish and an official auxiliary Romanisation of Siamese Thai represent the response.

In any discussion of geographical nomenclature there stands, on the one side, the question of procedure with regard to our own language, and, on the other, that of compromise with the rest of the world with regard to the treatment of names in all other languages. Our English and conventionally English names for places abroad are relatively stable within the English language. And native names are likely to prove the most stable abroad, official names, especially in certain kinds of federated countries and in foreign imperial possessions, being subject to change with change of government.

Lecture to the Royal Scottish Geographical Society, December 13, 1946

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SHELTERBELTS AND COTTAGE INDUSTRIES IN SCOTTISH PLANNING

By R. Maclagan Gorrie, D.Sc.

The publicity given to the activities of the Tennessee Valley Authority through the issue of Dr. Julian Huxley's and Mr. D. E. Lilienthal's [1] books and the reviews which have appeared about them have familiarised the Scottish public with some of the facts so ably portrayed in the film 'Tennessee Valley.' The moral of the story is brought a step nearer home by the publication of Dr. W. C. Lowdermilk's *Palestine, Land of Promise*,[2] in which he makes concrete proposals for a Jordan Valley Authority on the lines of the T.V.A. as a practical means of reconditioning the entire surface of the Holy Land. If the Jews can be given a short-cut to prosperity in developing the natural resources of Palestine, what is wrong with Scotland that it cannot have its own blue-print and an authority to work it?

The contrast between the British and American approach to such problems often leaves us at a disadvantage, for the British capacity for continued trial and error by unofficial bodies and individuals is apt to take so long to arrive at a conclusion that, in these swift-moving days of dramatic economic changes, the American preference for giving almost unlimited powers into the hands of a few carefully chosen executives has much to recommend it, provided their approach is practical and not doctrinaire. The choosing of such executives is, of course, the acid test of democracy, and we are not likely to be helped by merely copying the framework now in use in Tennessee or outlined for Jordan. That we have not yet evolved a complete solution in terms of land utilisation is clearly shown by the present divergence of views on the future management of forest estates. The vital rôle of the shelterbelt has to a great extent been overlooked in the Forestry Commission's attempts to help the landowners, many of whom wish to develop and extend existing shelterbelts.

Proposals now incorporated in an Enabling Act[4] have been put forward by the Forestry Commission for the dedication of private lands suitable for planting, and regional advisory committees have been appointed to advise on and control the work of afforesting private estates, but the proposed act has been very strongly criticised by representatives of the English and Scottish Forestry Societies on the grounds that the proposed dedication agreements are one-sided and likely to penalise the landowners later on.

There are very few forest estates large enough to be comparable in size with the Forestry Commission's spectacular transformation of whole valleys by planting, though such are more common in Scotland than in England. Most owners are fully alive to the possibilities of large-scale plantations but are quite unable to face the expense, even with the planting and maintenance grants as now offered by government. On the other hand, state control of private forest estates would produce a very anomalous situation, because owners of woodlands would be controlled by a state department which is itself already by far the biggest woodland owner, and will in future be the

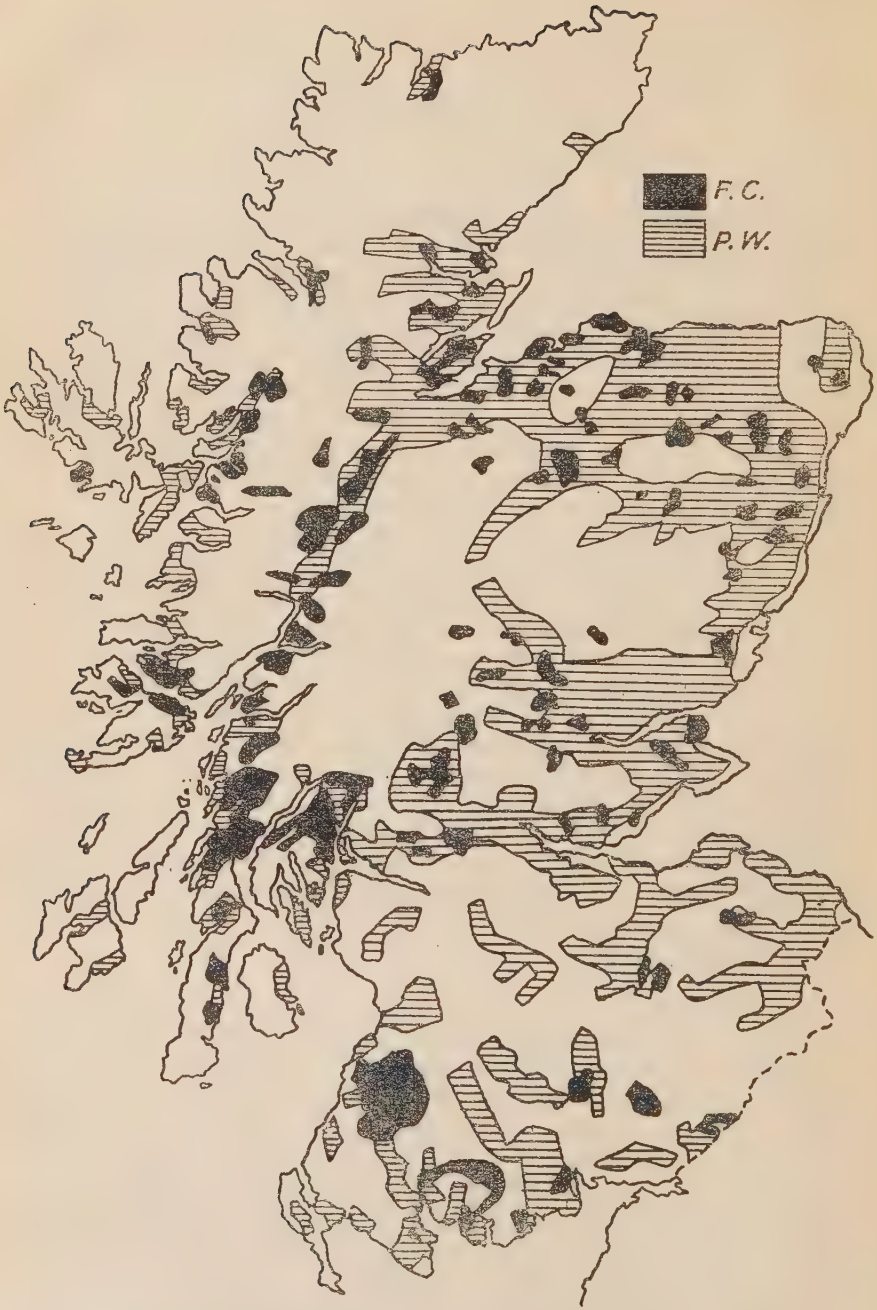

Fig. 1. Scotland. Forestry Commission areas (F.C., black) and areas of private woodlands including shelterbelts and amenity woods (P.W., hatched).

small owner's chief competitor in the marketing and disposal of all forest produce. Throughout England, and in many parts of Scotland, there are many small estates which can only get the full benefit of technical advice and efficient forest management if they are worked in groups. In both countries, moreover, the management of small woodlands and shelterbelts is of vital importance in building up a genuine integration of land uses, and this is one of the main points at issue between the Forestry Commission and the forestry and agricultural communities, for so far no real provision has been made in the Commission's economy for maintaining, harvesting, and replacing the network of shelterbelts and small copses which are such a characteristic feature of our Scottish countryside, and so important to the live-stock owners and sheep farmers.[3]

Such irregular perimeters are expensive and unsatisfactory to fence; but as long as the rabbit remains a scourge, fencing is essential for the protection of any young transplants or seedlings. The grant offered is £10 an acre first cost, but the irregular shape so usual in shelterbelt plantations will cost £20 in fencing alone, leaving nothing for the cost of plants or of planting. Some criterion other than the cost per acre of fencing must be sought if estate owners and hill farmers are to be encouraged to replace the many shelterbelts which have been sacrificed to the demand for war timber, or have ceased to provide shelter for live stock.

But this matter of shelterbelts cannot be pursued energetically by the Forestry Commission, whose present staff have their hands full with their sanctioned programme of planting up the large blocks of land already acquired outright by the Commission. There is therefore scope for establishing co-operative groups of owners to secure the best technical advice and management, which cannot be afforded by the single land-owner working on his own. Also a larger group of trained labourers can be organised and kept fully employed by a co-operative, and kept mobile by means of road transport to attend not only to the ordinary seasonal demands but also to fire-fighting. Co-operative management has succeeded admirably in similar problems in Sweden and Switzerland, and even comparatively backward places like the Punjab can show good results obtained by co-operative societies of peasant farmers in the afforestation of their own waste land.

Permission to fell trees is now vested in the Board of Trade, but the proper management of shelterbelts must emphasise their biological function rather than their commercial exploitation. In response to government's call for dedication of woodland, 146 owners in Scotland have offered 123,000 acres, but if this is tackled piecemeal for replanting and improvement wherever it is offered, the work will be so scattered that it will make no effective contribution to regional improvement. To guard against this, it would be advisable to award priority to those districts in which forestry can make its best contribution to the welfare of the community as a whole, and in this respect shelterbelts should be given a high place.

To arrive at correct decisions on such points, something more effective than an advisory body is required, and yet the ultimate control should not be too distant. In terms of regional control, the T.V.A. has got more or less complete decentralisation from government headquarters in Washington, and again, within the Authority's own region, decentralisation is carried very

Fig. 2. Scotland. Areas in which shelterbelts are of actual or potential importance (hatched). The hatched portion is below 1500 feet elevation.

much further than is the case in our own Forestry Commission. The four existing ' regions ' of Scotland which now form conservator's charges could each form a convenient unit within which the relative needs and merits of counties and districts could be settled by the conservator and his advisory committee without referring every decision to London.

Dr. Lowdermilk's Jordan Valley Authority proposals are concerned with the primary needs of water and power and soil conservation, with afforestation of the upper hills as an insurance for all three of these needs, while the rest of the land is to be used to the best advantage for crops, fruit growing, and live stock. In our Scottish problem we are blessed in being relatively free from soil erosion, which menaces the prosperity or has already destroyed it in so many less fortunate lands, but otherwise the problems are surprisingly similar, for afforestation of waste lands is fully justified as a major land use, and cheap power must, of course, be a basic necessity in any attempt to bring more people back to the land and build up new rural communities.

Starting with small groups of forest workers' holdings where a man and his family can keep a cow and poultry, and grow vegetables in the intervals when labour can be spared from the Forestry Commission's work, there are several further steps in making these little communities more fully self-supporting and stable. To establish cottage industries, the co-operation of wood-working firms is obviously essential, also cheap power to help the small-holder and encourage small factories. A fuller programme of forestry operations in adjoining private estates will give further employment out-doors. Amenities such as schools and travelling libraries are needed so that the small-holders' families can be catered for. Unfortunately, in the type of small-holders' cottage so far sanctioned, the arbitrary limit of cost has kept the size and number of rooms down so low that in the less accessible places there is little encouragement to produce children, for there is no room for them. It is only where building materials are cheaper (and therefore in the holdings placed nearer some large town or centre) that a second bedroom of reasonable dimensions has been allowed. This is the sort of anomaly that a well-constituted local land-planning authority should be given powers to alter, so as to make financial control the servant and not the master in the resettlement of our countryside.

In areas such as the Slamannan plateau south of Falkirk, the problem is not to produce new buildings but to find suitable employment as an alternative to coal-mining. As the mines become exhausted the existing accommodation is likely to rot unused unless fresh activities can be established, and according to Sir Frank Mears' report on the planning of Central and South-East Scotland, this can best be done by concentrating upon shelterbelts as a means towards reviving dairying and establishing forestry as an additional activity.

The routine work of the Forestry Commission in planting and tending young woods on land acquired outright by government is already established on a scale which few of the residents in Britain realise, though it will doubtless become better appreciated when holiday wanderings in less accessible parts become once again feasible to the town-dweller. Vast tracts of land in our lonely valleys which have previously supported a few sheep and grouse are already producing ' thinnings ' from young pole woods. This

material if forcefully pioneered through the teething stages of cottage industry or small village factory could almost at once support many more persons in the villages adjoining these new forests. But if this is to be of immediate service in resettling men and families on the land, a much closer contact must be forged between the Forestry Commission, the Forests Products Laboratory at Princes Risborough, and private interests such as toy makers, turnery factories, rustic furniture makers, fence and paling makers, the larger units manufacturing timber houses, garages, and prefabs, and also the ex-service organisations which have been training men in handicrafts. Edinburgh University could also contribute by including this phase of work in their proposals for an ' outdoor laboratory ' at The Bush and Dryden estates.

Advance samples of the type of timber billet which will shortly become available from the Commission's young woods in millions of running feet should be issued freely to all potential users, and some indication of the areas and forest blocks where this will be coming from, the quantities which may be expected annually during the next five years, and the proportion of the various soft-wood species, so that the prospective users may judge for themselves of the relative values for their own particular purposes. The kind of material which will become available from the earliest thinnings in 14- to 16-year-old Sitka spruce, Douglas fir, and Jap larch, is a pole 15 to 18 feet long, diameter 4 to 5 inches at the butt and tapering to 1 inch at the tip, with whorls of branch knots every foot or 18 inches. But between these whorls the short lengths of billet have remarkably clean, smooth, white wood, ideal for many items of toy and turnery. Later the type of material will, of course, alter as the trees become larger, and eventually much fine saw timber will become available in addition to the thin billets now under discussion. The point to be emphasised here is the urgent need for co-ordinating the plans of the supplier and the potential users, so that the essential first steps can be taken in utilising this new source of raw material in ways which will best help our sadly depopulated countryside.

One interesting item of news from the recent American account of ten years' work on their Middle West shelterbelt project, which met with so much opposition when it was initiated, is that shelterbelts immediately around farm-houses do appreciably reduce the bill for fuel, the reduction being in many cases as much as 50 per cent. in the course of an average severe winter. In the present British fuel emergency this is of some significance.

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[1] Reviewed in *S.G.M.*, 1945, 61 (*3*) : 103.
[2] Reviewed in *S.G.M.*, 1946, 62 (*2*) : 88.
[3] *Forestry Abstracts*, 1945.
[4] H.M. Forestry Commission Leaflet No. 24.

THE LAND UTILISATION SURVEY OF NORTHERN IRELAND

By Douglas A. Hill, m.a.

Whilst it is not proposed here to discuss the nature and extent of the Scottish contribution to the land use pattern of the North Irish countryside, its significance is beyond doubt; and even where that pattern is markedly changed from the one in the homeland of Scotland, these changes are some measure of the interrelation of Scottish and Irish land utilisation systems over several centuries.

The Land Utilisation Survey of Northern Ireland was first considered by the Geographical Association (N.I.) in 1936. After a preliminary trial survey, a start was made in the following year with the field work of a limited area around Belfast. The success of these initial efforts encouraged the Geographical Association to extend the scope of the project so as to cover the whole area of Sheet 7 (Belfast) of the one-inch Ordnance map (Popular Edition). By the early months of 1938 this had been accomplished.

The scheme of land classification adopted is very similar to that used by Dr. Dudley Stamp in Great Britain, but some small though important changes were made to provide for the distinctive features of the land utilisation pattern in Northern Ireland. The most important of these was to group all good grassland into a single 'Grassland' group.[1] By this means, the complicated relationship of rotation grasses to more permanent grassland was overcome in a way which enabled that marked feature of the land utilisation pattern—fragmented cultivation—to be expressed fully in both one-inch and six-inch maps.[2]

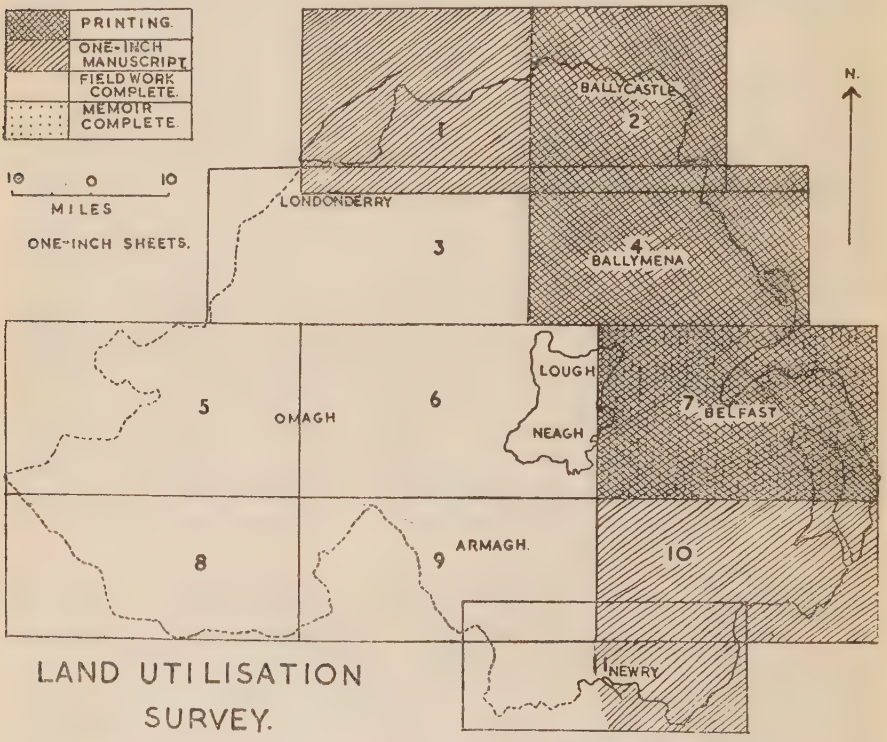
Bogs also needed special consideration, a distinction being drawn between 'lowland' bogs and 'mountain' bogs. The former have been included in the group with land agriculturally unproductive, whilst the latter have been classified with rough hill pastures. The guiding principle in making this distinction was found in the 'improvement' value of bogland. Lowland bog, when the peat is dug out, usually passes to cropping, whilst upland bog is turned to grazing.[3]

With the completion of the Belfast region, the progress of the Land Utilisation Survey during the next six years was largely conditioned by the financial help which could be obtained, and the expansion to the remainder of Northern Ireland proceeded, sometimes slowly and in certain areas more rapidly. Success more than anything else gradually brought the additional help needed.

In 1938, by the formation of local Survey Groups in North Antrim and North Derry, the field survey was expanded to those areas covered by sheets 1 and 2 of the one-inch Ordnance map (Popular Edition). Sheet 2 was completed by the Groups in Ballycastle and Ballymoney, but sheet 1 was only partially finished by those in Limavady and Coleraine. A team of volunteers was organised, and this sheet, too, was completed; the local Groups also assisted materially by providing their own six-inch maps.

The value of the work was recognised, and the Department of Agriculture, Queen's University of Belfast, provided the six-inch maps of the remaining parts of Northern Ireland. Through the success of an appeal to the teachers, eighty-five per cent. of the new scheme was completed in 1939, and the success of the Land Utilisation Survey was assured.

With the deterioration in the war situation during 1940 and the collapse of France the work of the Survey was suspended until 1942, when conditions once again became favourable. The field work still to be done was greatly reduced, as the Ordnance Survey had collected adequate detail in their re-survey of much of Co. Tyrone just prior to the war. The remainder has



Northern Ireland. Progress of Land Utilisation Survey.

been done, with much voluntary help from the tillage officers, especially in isolated areas of Cos. Down, Fermanagh, and Armagh, throughout for the 1939 cropping year.

It was also in 1942 that the Planning Advisory Board, Ministry of Health and Local Government (N.I.) became aware of the Land Utilisation Survey and its value in its post-war planning programme. The work has since been encouraged and assisted by grants which have provided for its completion and publication.

The work of reducing the six-inch records to the one-inch scale is being pushed forward rapidly and should be completed during the present year. The writer, who was entrusted at the outset with the task of directing the Survey, is responsible for this work. Checking and colouring of the six-inch

field sheets by many voluntary workers have completed this part of the work for Cos. Antrim, Down, Armagh, and Derry, but about twenty-five per cent. of Cos. Tyrone and Fermanagh still remain to be done.

The one-inch manuscript maps—similar in character to those produced in Great Britain—have already been prepared for Cos. Antrim and Down. Five sheets (2, 4, 7, 10, 11) of the one-inch Ordnance map (Popular Edition) have been used, and of these sheets, 7 (Belfast) and 2 (North Antrim) are in the press. The remaining three sheets are now almost ready also. Beyond that, progress must depend upon the provision of the basic Ordnance sheets.[5]

In addition to the one-inch maps, the Survey plans to prepare eight memoirs of which the first—Belfast Region—has been almost completed by the Director. Also, a volume is planned for each of the six counties and a final and more comprehensive volume covering the whole of Northern Ireland. The county volumes are arranged in four main chapters which include an introductory chapter on the methods of the Survey, followed by one on each of the following aspects : The Physical and Structural Background ; The Climate ; A Critical Analysis of the Present Utilisation of the Land ; A Geographical Study of the Agriculture of the Area for the Period 1928-39.

The final volume is planned to contain a series of studies by authoritative writers, and will include, *inter alia*, the following: The Geographical Background ; The Human Background ; The Regional Distribution of Land Usage Types in Northern Ireland ; The History of Agriculture in Northern Ireland.

It may not be out of place to conclude by referring to the Constitution of the Land Utilisation Survey. It began as, and still remains, an integral part of the Geographical Association (N.I.), but its affairs—under the control of the L.U. Sub-Committee—are kept completely separate from those of the Association—a periodic progress report by the Director being the chief means of contact. In organisation, it is entirely voluntary. There are no paid officials whatever, and the work of the Survey, whether administrative or technical, is upon a voluntary basis, arranged and directed by the only permanent officer—the Honorary Director.

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[1] In Great Britain, rotation grass is classified with ' cropped land.'

[2] On the six-inch maps, grassland is subdivided into : (*a*) short ley ; (*b*) longer ley ; (*c*) permanent meadow ; (*d*) water meadow.

[3] Hill, D. A. " Land Utilisation Survey of N. Ireland." *Geography*, September 1939. " Land Utilisation in the Belfast Area." *Ibid.*, March 1947. " Some Problems of Land Utilisation Work in Northern Ireland." *Irish Geography*, 1947.

[4] Information regarding maps and publications can be obtained from the Honorary Director, ' Greengarth,' Causeway End Road, Lisburn, Co. Antrim.

[5] The completion of the Ordnance Survey Map (Popular Edition) on a scale of one inch to the mile was delayed by the war.

THE GARELOCH—ANCIENT AND MODERN

By J. Arnold Fleming, o.b.e., f.r.s.e.

There are two delightful routes by which we can approach the Gareloch from the south-east. The more obvious one is from the Clyde through the Narrows, and the other, by the old Highlandman's Road, is almost unknown to the present generation. This road once started from Dumbarton, and went up the Vale of Leven and onwards into Glen Fruin, where at the Black Bridge we climb the saddle on the left till we reach Torr farm, where the Gareloch bursts into view, and a branch road descends to Rhu. But the main way skirts the hill top to Whistlefield, and goes down to Portincaple, where a ferry awaited the traveller, across Loch Long to Loch Goil and the west, before wheel traffic entered the Highlands. This neglected pack-horse track is hidden to-day by moss, heather, and scabious, fringed by tall bracken. Beyond the policies of Ardencaple Castle there are faint remains of a Roman fort, and also above Shandon station. Another path is reached from Helensburgh, with the Glenan burn on the right. By it we pass the Druid Stane, with its cup markings, split by lightning, though tradition says it was blasted by Covenanters to wipe away all trace of pagan worship.

From the vantage ground at Torr farm, the Gareloch, seven miles long and averaging some seven furlongs in width, and the surrounding district are spread out before us. The axis of the loch is in line with that of Loch Goil and Hell's Glen, suggesting that the two lochs were originally one valley containing a tributary of the Clyde, then running eastwards, from the ancient watershed along a mountain range west of Loch Long, to the Forth.[1, 2] Athwart this axis, the line of the Highland boundary fault is evident, particularly well marked across the tip of the Rosneath peninsula where the resulting depression is utilised for the road between Rosneath and Kilcreggan (see photograph).[3] The eye never wearies of the enchantment of cloud and sky and green hills mirrored in the loch. The ice age has left its heritage of softly contoured slopes immediately surrounding the Gareloch, which are in striking contrast to the distant background patterned by the hard schistose grits of Argyll's Bowling Green between Loch Goil and Loch Long (see photograph).[3] Glacial action is also responsible for much of the submarine topography of the Gareloch. The spit at Rosneath and the longer one at Rhu make the loch land-locked except for the S-shaped Narrows, where tidal streams (usually $1\frac{1}{2}$-$2\frac{1}{4}$ knots) may reach a rate of up to five knots, but diminish rapidly inside. On the eastern side of the loch the tidal stream may be seen running in while that along the western shore is running out more rapidly.[4]

Below Torr farm, and midway between Helensburgh and Rhu, stands Ardencaple Castle—the sea once lapped against its walls—the ancestral home of the chieftain of the Clan Macaulay. More immediately below nestles the village of Rhu, its kirk and graveyard hidden among spreading trees, but how few passers-by bestow a glance towards the Parish Church. Yet here a fresh impulse was given to religious thought by the Rev. Dr. McLeod Campbell, which was to influence Scottish character. Cairndhu Bay provides ample anchorage, formerly used for sailing vessels from the

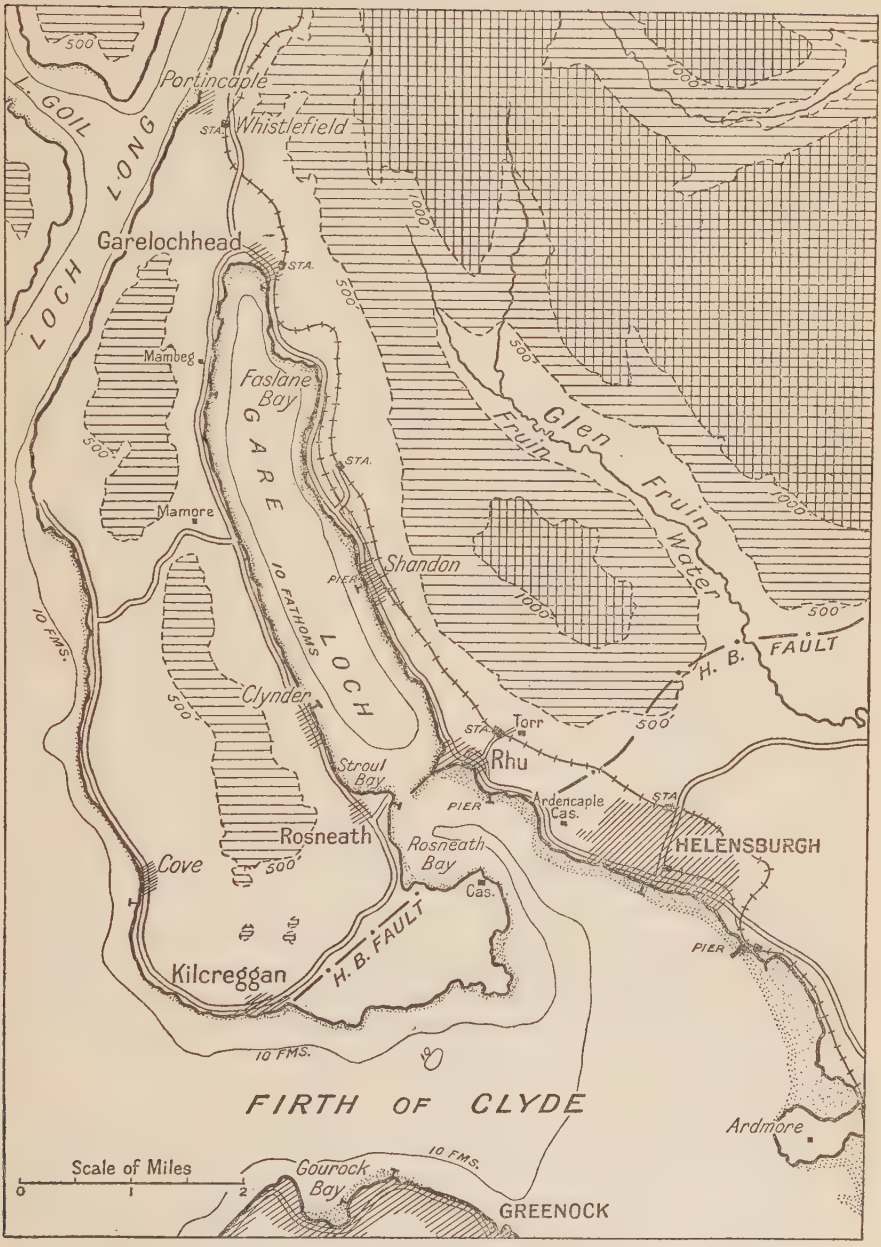


Fig. 1. The Gareloch. Land over 500 feet and 1000 feet (hatched), and Highland Boundary Fault. Oblique hatching : built-up areas.

Continent and America, before the Tail of the Bank was deemed more desirable and the river Clyde was dredged to a navigable depth. Queen Victoria, on the Royal yacht, found shelter in Cairndhu Bay during a squall, and in some contemporary charts the name Queen's Bay is given.

We descend by the Smuggler's, or Whistler's, Glen, a quarter of a mile to the north of the church. It was originally called Alltdonalt (the burn of Donalt or Dualt). Letrualt lies on the right bank of this stream; further to the west is Letrualt-Mhailium (enclosure of the mill). This ravine is a mile long with deep linns, covered with alder. Through the branches of the trees the sun sheds shadows on cushions of bronze-green moss and damp banks sprinkled with starry clumps of anemones. Each outcrop of rock is coated with velvety lichen, and pools are hidden by catkin—an ideal place for the smuggler to make a get-away when the revenue cutter made an unexpected raid. The ' Whistler ' of the later place-name is the lawless scamp who was kidnapped by Donacha Dhu, master of this glen, where Effie has an interview with her son when on her way to her lovable sister, Jeanie Deans, across at Rosneath, ' Knocktarlie ' in *The Heart of Midlothian*. There is no glen at Rosneath that corresponds to the description, but the Whistler's Glen conjures up the tale and adds to its thrill. Such was Scott's genius.

The most outstanding edifice on Gareloch side is West Shandon House, built by Robert Napier, the noted shipbuilder and engineer, who launched our first iron steamer (of 52 h.p.) and first Cunarder. This place, on which much treasure and time had been lavished in laying out the grounds with ponds, waterfalls, and with avenues of araucarias, deodars and fine timber, passed into the possession of an hotel company who had to relinquish it to the Admiralty, as their headquarters during the two world wars. The first published advertisement of steam navigation (August 5, 1812) made the Gareloch accessible to Glasgow with comparative ease. Merchant princes and their families built residences, and some who had been nabobs in the East brought home with them rare plants with which they adorned their gardens. Azaleas, rhododendrons and Japanese maples, and the yucca are an index of the mildness of the climate [5] which favours the successful acclimatisation of many other foreign plants. In the uplands, clumps of *Saxifraga aizoides* prosper; in another locality (around Fernycarry), *Bartsia viscosa* is remarkably abundant. *Carum verticillatum* and *Lythrum Salicaria* thrive. *Valeriana pyrenaica* is met with on the banks of streams at Rosneath, and *Trollius europaeus* and *Convolvulus sepium* flourish. An indication of the wealth of the flora in Rhu and Rosneath parishes is given in *The New Statistical Account*.[6]

Beyond Shandon is the bay of Faslane, near which a mound represents the site of Faslane Castle, once the seat of the Earl of Lennox. Near by is the ancient roofless chapel, built of rough hewn stone, and over its neglected and shattered altar are two lancet windows. Tradition affirms that Robert the Bruce worshipped here when he was worn out after he had served his country by defending her independence. There are three garden graveyards of surpassing beauty, at Rhu, Rosneath, and Faslane. In Faslane cemetery lie tinker, soldier, and sailor, and of all God's Acres in Scotland it is the most idyllic. The tragic disaster of H.M. Submarine K 13 while on her trial trip, sinking with all hands in Faslane Bay on January 29, 1917,

is recalled by the monument to their memory. Another monument, erected by shipmates of *Empress of Russia*, is near by. Though formerly ships' compasses were tested near the head of the loch, the latter has served more as a haven for both men and ships after their service is over.

As we retrace our steps from the chapel to the shore, we are faced with a grim contrast. Belmore, once a private residence, with its exquisite rock garden, now contains the offices of Metal Industries Limited. The necessity of war has altered the landscape. Gashes were hewn out of the hillsides as quarries for building material and concrete piling. Everything about the forming of Faslane Port was on a gigantic scale and carried out efficiently in the space of two years by the Royal Engineers. Bull-dozers as well as mechanical diggers gave short shrift to any obstacles. Out of hard clay-shale, as if it were plastic clay, was scooped a marshalling yard for two and a half miles of railway track. This branch railway starts at Shandon on the L.N.E.R. and descends to shore-level at an average gradient of one in sixty-five—including exchange sidings altogether twenty-two and a half

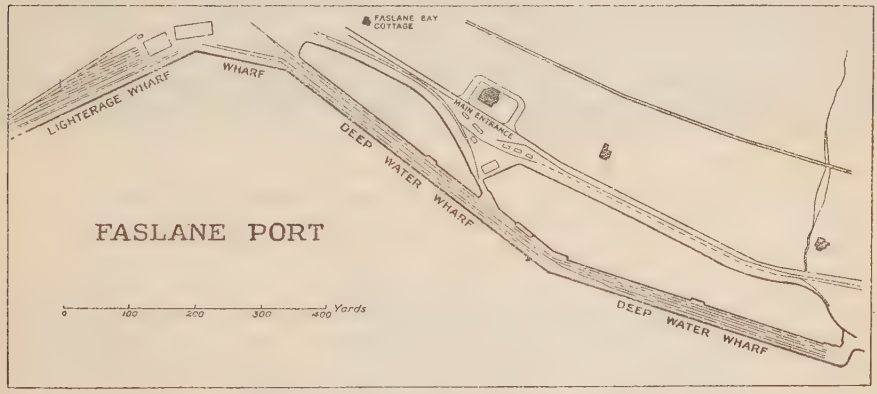


Fig. 2. Faslane Port.

miles of track. The sidings were sufficient provision for cargoes awaiting the arrival of great liners to be loaded at the maximum speed. The most modern harbour equipment has been installed. There are six berths, each of 500 feet, in all 3000 feet of deep-water quays, and there is a further wharfage of over 1300 feet for motor barges, etc. (see Fig. 2).[7] Nineteen diesel-electric driven cranes are powerfully built to lift six tons, and eight cranes of a similar type to lift thirty hundredweight each. Besides, there is a very useful floating crane for handling heavy machinery. Over and above this is a huge floating dock, measuring overall 680 feet and with a beam of 144¾ feet, capable of tackling a ship of 30,000 tons and some 700 feet long. The average depth of water at the sill of the Faslane quays is 32 feet, and as the tide here rises and falls only 10 to 11 feet, except at spring tides, Faslane Bay afforded most favourable conditions for its purpose, and was an important factor in its choice by the Service authorities; the barrier at the Narrows must also be taken into account. It was only by unremitting toil and clever planning that this great enterprise was achieved. How many men were engaged, how much it has cost, how many troops embarked and landed here, and how much material and munitions were

dispatched may be beyond computation. But it suffices to say that everything went smoothly and efficiently, and there was never a hitch nor a serious accident. 'Military Port No. 1' is indeed a monument of high endeavour.

The raising of the German battle-cruiser *Derfflinger*, scuttled in Scapa Flow in 1919, and towing to the Gareloch was a memorable event. Her entrance into the floating dock was a delicate and risky operation, for her 27,000 tons had to be shored up by baulks of timber weighted with heavy cable to counteract their buoyancy and to ease the strain of the protruding gun turrets, for the vessel was upside down (see photograph). At Faslane, too, lay dismantled H.M.S. *Iron Duke*, flagship of Lord Jellicoe. Here was typified the turn of the wheel of fortune and the tragic folly of war. The armour-plating of these discarded warships is being cut up as a contribution of great worth to our post-war recovery. This may be reckoned as a credit balance for all the local devastation.

Leaving Faslane Port, we walk round Rowmore Point and enter Garelochhead (see photograph), once a fishing village when shoals of herring and saithe were visitants during spring and autumn. A few of the older inhabitants still speak Gaelic. Thence we proceed along the western shore, passing through Rahane, Mambeg, and Mamore to Clynder, noted for its boat- and yacht-building yards. Messrs. McGruer and Co. Ltd. and James A. Silver Ltd. here have slips for launching and for wintering vessels of 100 tons. The slate quarries, now abandoned, both here and at Garelochhead, testify to the presence of the clay-slate band which can be traced from Bute to Luss and beyond, and which conditions the more gentle aspect of the Gareloch, as contrasted with the craggy character of the hills surrounding Loch Goil.[8] Near Clynder, in Stroul Bay is a tiny islet covered at high tide, Carraig an Roin, a former haunt of seals. We now ascend a short hill and arrive at the Clachan of Rosneath, often written Roseneath. This is an error, even if it sound more fragrant. The place-name is derived from Ros noeth (an unwooded promontory), or Ros na Choich (the Virgin's point), or Ros Neyt, Neveth, or neimhid (churchland point). Locally, Rosneath is known as 'the island,' and the conglomerate, with ridges of boulder clay to the shore, offers a sharp contrast to the schists north of the Highland Boundary Fault. There are several sharp outcrops, one being known as Wallace's Leap from that day when, after setting fire to Rosneath Castle, Sir William spurred his steed over the cliff. The horse was killed, but its rider escaped injury and swam across the loch to freedom. The secluded situation of Rosneath accounts for the circumstance that pious men, from remote ages, here found a retreat amid genial surroundings, so that there has been shed over it a halo of sanctity. No fairer rural parish could have been conceived, so it had its titular saint. In a bosky dell near the western boundary of the 'island' is Saint Modan's well, a monument of this missionary from Iona who reared his rude cell here about the eighth century. The old church is now a ruin and has been superseded by the attractive present one. Many learned men have found inspiration in this peaceful place, and several sons of the manse have reached fame. James Anderson became Professor of Natural Philosophy at Glasgow, where he founded the Andersonian College; Matthew Stewart was appointed Professor of Mathematics at Edinburgh; the Very Rev. Dr. Story rose to

Photo by Valentine & Sons

THE NARROWS

GARELOCH

GARELOCHHEAD, FASLANE BAY, SHANDON

ROSNEATH BAY,
FIRTH OF CLYDE
AND ARRAN

hoto by
. G. Gilchrist

GARELOCH.
FASLANE PORT

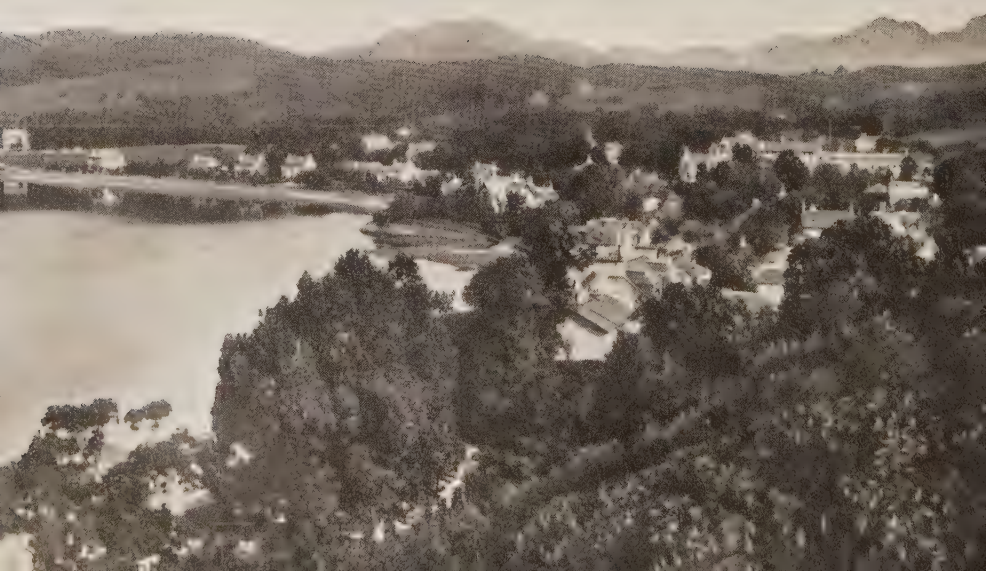
DERFFLINGER
IN FLOATING
DOCK

Photo by Valentine & Sons L

SHANDON

GARELOCH

GARELOCHHEAD



be Principal of Glasgow University ; and the Very Rev. Dr. Charles L. Warr, Minister of St. Giles' and Chaplain to the Royal and Ancient Order of the Thistle. The Communion Cups of this church are among the most precious of Scottish ecclesiastical silver and bear the Deacon's 'punch' stamp of the Incorporation of Goldsmiths in Edinburgh, A.D. 1585.

The village is the property of the Duke of Argyll. The present Castle was built in 1803, on the site of the former one, to the plans of Bonomi in Ionic style. Only the northern facade has been completed with porch and columns. The handsome front has a dignity of its own, but it awaits the whole plan to be carried out, if ever. The finely proportioned round tower is the dominating feature, and formerly contained a comprehensive library and a fine collection of art treasures, now dispersed. The Home Farm, built on rising ground behind, has a square tower, ninety feet high, commanding an extensive view of the Firth of Clyde as far as the hills of Arran, some thirty miles distant.

Here again the scene has changed. With the arrival of the American forces the village was awakened overnight from its torpor. The Castle was converted into a naval arsenal. Campsail Bay was made into a dock capable of berthing the largest steamers. All the essential appurtenances for handling cargo were erected without delay. The noise of industry rent the still air, and every available space was covered with Nissen huts and ammunition dumps. Since the departure of the U.S. forces the 'island' has been taken over by the Admiralty, and the peninsula is littered with camps. The picturesque Ferry Inn, designed by Sir Edward Lutyens, stands precariously amid its strange surroundings.

Certain features have been passed over, but there are dates to be recalled, milestones in the altered geography of this region. First, the building of a turnpike road round the loch. Second, the first successful entry of steam navigation about 1812, which affected the population and communication with the west of Scotland in general. Third, the opening of the railway from Glasgow to Helensburgh in 1858, which hastened the popularity of the Gareloch. Fourth, the cutting of the West Highland section of the old North British Railway along the eastern hillside in 1894, giving access to the western isles via Mallaig. Fifth, the internal combustion engine made available what remained of the beauty of the scenery. Sixth, the once placid waters of Cairndhu Bay are now cluttered with buoys, and its shore with high hangars for the accommodation of seaplanes.

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[2] CADELL, H. M. "The Story of the Forth," pp. 64-66. Glasgow : James Maclehose and Sons, 1913.

[3] Photograph by courtesy of Mr. Ian G. Gilchrist, A.R.P.S.

[4] HYDROGRAPHIC DEPARTMENT, ADMIRALTY. *West of Scotland Pilot*, 8th ed., p. 90. 1934.

[5] Cf. ADAM, ROBERT M. "Plant Indicators of a Local Climate." *S.G.M.*, 1946, 62 (*1*) : 24-26.

[6] *The New Statistical Account of Scotland*, Vol. VIII. 1845.

[7] Plan of Faslane Port, by courtesy of Metal Industries (Salvage) Ltd., who also very kindly supplied the air photograph.

[8] GEIKIE, Sir ARCHIBALD. "The Scenery of Scotland." London : Macmillan and Co. Ltd., 3rd ed., 1901.

Rt. Hon. Sir HALFORD JOHN MACKINDER, p.c.

By A. Stevens, b.sc.

Of the stalwart builders of the new British Geography almost all are gone, and now Mackinder has followed. They were not many, and a remarkable proportion of them were closely associated with Scotland and the Royal Scottish Geographical Society: Herbertson, George Chisholm, Marion Newbigin. Each of these made a characteristic contribution to geographical study and thought which it is easy to recognise and appreciate. One reveres them as great geographers. But Mackinder? Undoubtedly he was a great geographer, a contributor in thought, method, and inspiration to the development of the subject. Was he not also a great man as the world recognises great men? Angels are normally entertained unawares: great men are most safely recognised by posterity.

Mackinder's overt geographical life began in 1887 with his readership at Oxford and concluded with his death. His teaching (in the fuller sense) is associated with a sane geopolitics which appears in *Britain and the British Seas* and becomes explicit in his latest writings. Inherent in it is the view of geography and history as complementary human studies, preoccupied respectively with the space and time conditions to which is subjected the activity of man.

But Mackinder can not be estimated simply as a professional geographer. The bald recital of his doings in *Who's Who?* excites amazement. Politician, statesman, administrator within and beyond the academic sphere, he trod adventurous paths and never went astray. He has shown us lesser people what can be done with a geographer's life. He was an adventurer of the better order who never was found out. He also was a great man.

BELLINGSHAUSEN'S ANTARCTIC VOYAGE

Review by Professor R. N. Rudmose Brown, d.sc.

One of the least known of all the early Antarctic voyages is that of Captain T. Bellingshausen in 1819-21, and yet it was one of the boldest and most successful. Its oversight is due largely to its having been a Russian expedition with its official and only account in that language and not published until 1831. A partial rendering in German by H. Gravelius was published in Leipzig in 1902, but no full and scholarly English translation was made until the present edition[1] for which we are indebted to the enterprise of Professor F. Debenham and the Hakluyt Society. Accounts by other officers of the expedition, which were deposited in the Russian Admiralty, were not available. Of Bellingshausen's own work and atlas only 600 copies were printed, so that scarcity is added to linguistic difficulty in making use of it.

Early last century the Emperor Alexander I, anxious to enhance Russian naval prestige, despatched expeditions to the north and south, each with an ambitious programme. The southern one, in *Vostok* and *Mirnyi*, was put under the command of Captain T. Bellingshausen who had previously

served with Kruzenstern in *Nadezhda* in his voyage to Japan and round the world in 1803-06. Like Cook and other naval commanders, Bellingshausen sailed with fairly definite but fortunately not rigid instructions. The expedition had also the usual drawback of nearly all naval expeditions in having ships not wholly suitable and crews so large that they would have been a serious liability if all had not gone well. Bellingshausen as commander was a wise choice. He had skill, judgment, persistence, and continual solicitude for the well-being of his officers and men. The scientific equipment was good, but all attempts to find naturalists, Russian or foreign, to accompany the ships, failed. The plans did not differ greatly from those of Cook, and the achievements were on closely parallel lines. There was, for both navigators, a great and wholly blank area to be investigated, with only the vague possibility of land to be discovered and always the danger of scurvy to be faced, especially if a wintering had to be made. No expedition had wintered in the south, and it was nearly a century before any expedition dared to do so. Scurvy was a scourge that Bellingshausen dreaded and succeeded largely in avoiding by using good and, if possible, fresh food : " by which means we succeeded in putting the crew into such good humour that many of them quite forgot their minor troubles." Thus did Bellingshausen show his ability as a catering officer, as Cook also had done.

Exploratory work began with some surveys in South Georgia, after which the ship went on to examine Cook's Sandwich Islands. There the Russians' work was not surpassed until *Discovery II* surveyed the group in 1930. The other important discoveries were made in the Graham Land or West Antarctic area where Peter I and Alexander I Islands were found ; so named as " indestructible monuments that will commemorate the names of our Emperors to the remotest posterity." The sea in this area is now fitly known as the Bellingshausen Sea. These were all his landfalls in the far south except several of the South Shetlands, Elephant and other nearby islands. It is a mistake to say that he surveyed part of the South Orkneys (p. xxvii). In lower latitudes Bellingshausen did useful surveys in the Paumotu Archipelago, visited Macquarie Island and New Zealand, gave an excellent account of the settlements of New South Wales, and noted social conditions in Brazil.

Perhaps more important than his discoveries of several islands were the indications of land in the far south which the careful Bellingshausen hesitated to put on the map as new discoveries. Thus the expedition narrowly failed to make striking additions to the almost blank map of high latitudes. On January 16, 1820, in lat. 69° 21′ 28″ S., long. 2° 14′ 50″ W., the ships were brought up by " a solid stretch of ice running from east through south to west." There they cannot have been more than twenty miles from that part of Antarctica now called Princess Martha Land. A few hours clear weather, says Professor Debenham, would have antedated by 110 years the discovery of this part of the continent. Then again on February 5-6 of the same year, a few degrees farther east, in about lat. 69° 06′ S., and long. 15° 52′ E., Bellingshausen records " ice-covered mountains rising into the distance," a vision very like the *Scotia's* first sight of Coats Land in 1904. This no doubt was Princess Ragnhild Land, part of Queen Maud Land. If these lands had been acclaimed as discovered, the expedi-

tion would have had sensational results in reviving the old conception of a Terra Australis which Cook had gone far in demolishing.

The volumes are admirably produced in the usual Hakluyt style and have many illustrations and maps, besides frequent notes and a long introduction by the editor.

[1] *The Voyage of Captain Bellingshausen to the Antarctic Seas*, 1819-1821. Translated from the Russian. Edited by FRANK DEBENHAM, O.B.E., M.A. $8\frac{3}{4}\times5\frac{5}{8}$. Vol. I. Pp. xxx+1-259. Illustrations 1-24. 6 maps. Vol. II. Pp. viii+261-474. Frontispiece. Illustrations 25-36. 9 maps. Works issued by The Hakluyt Society, Second Series, Nos. 91-92. London : The Hakluyt Society, 1945.

NOTES AND REFERENCES

EUROPE

ROCKALL : ITS PAST AND FUTURE. By J. A. MACINTOSH. $7\frac{1}{2}\times4\frac{3}{4}$. Pp. 32. 2 sketches. Oban : Hugh Macdonald Ltd., 1946.

The historical notes in the first part of this pamphlet are based to some extent on the paper by Mr. Miller Christy in the *S.G.M.*, 1898, 14 (*8*) : 393-415. The second part deals with the author's ideas for the utilisation of Rockall as a landing place for aircraft by surrounding the rock by a metal cylinder which would act as a pivot for an elaborate ' carrier.' The lower decks of the ' carrier ' would provide accommodation for workpeople, visitors, storage, workshops, etc., and the rise and fall of the ' carrier ' by tidal action would supply the necessary electric power.

VARIATIONS IN THE LENGTH OF THE FROST-FREE SEASON. By GORDON MANLEY. *Quarterly Journal of the Royal Meteorological Society*, 1946, 72 (*312-313*) : 180-184. 1 fig.

The rapid local variability of the climatic environment in Britain is discussed, with reference to trends of average monthly minimal temperatures at a variety of sites in the Midlands. In England, the active growing season or period during which the mean temperature exceeds 42° F. diminishes with altitude by ten days for every 260 feet. There is reason to believe that, since about 1820, the months of December and January have tended to become warmer.

SOME OBSERVATIONS ON WARTIME GEOGRAPHY IN ENGLAND. By L. S. WILSON. *Geographical Review*, 1946, 36 (*4*) : 597-609. APPENDIX : BRITISH TOWN-PLANNING SCHEMES. By L. DUDLEY STAMP. Pp. 609-612.

GEOPHYSICAL PROSPECTING AND ENGLISH OILFIELDS. *Nature*, 1946, 158 (*4026*) : 931-934.

CUMBERLAND POPULATION MOVEMENTS, 1871-81. By T. H. BAINBRIDGE. *Geographical Journal*, 1946, 108 (*1-3*) : 80-84. 1 fig.

TEMPERATURE TREND IN LANCASHIRE, 1753-1945. By GORDON MANLEY. *Quarterly Journal of the Royal Meteorological Society*, 1946, 72 (*311*) : 1-31. 6 figs. 3 tables.

THE EVOLUTION OF KINGSTON-UPON-HULL. By G. DE BOER. *Geography*, 1946, 31 (*4*) : 139-146. 3 figs.

THE ISLE OF THANET. By W. H. CORKILL. *Canadian Geographical Journal*, 1946, 32 (*6*) : 256-265. 15 photographs. Map.

THE GEOGRAPHICAL DISTRIBUTION IN NORWAY OF CERTAIN INDICES OF HUMIDITY AND OCEANITY. By C. L. GODSKE. *Bergens Museums Arbok*, 1946, 1944 (*2*) : 9 figs. 4 maps.

THE TRAFFIC IN THE PORT OF FREDERIKSTAD : A STUDY IN ECONOMIC GEOGRAPHY. By T. OUREN. *Norsk Geografisk Tidsskrift*, 1946, 11 (*3*) : 97-135. English summary : 136-137. 18 figs.

ELECTRIFICATION IN DENMARK. By S. B. BOCHER. *Geografisk Tidsskrift*, 1944-1945, 47 : 1-42. 15 figs. 30 references.

DANISH AIR SERVICES AFTER THE WAR. By K. GREGERSEN. *Danish Foreign Office Journal*, 1946, No. 3 : 8-14. 4 photographs. Map of Copenhagen (1 : 100,000) showing Kastrup airport.

Kastrup, one of the best airports in northern Europe, is described. A further Class A airport is needed at Aalborg for regular international air lines. Airports for internal lines (Class B), in addition to those already existing at Aalborg, Esbjerg, and Bornholm, are to

be developed at Odense and Aarhus. Post-war expansion of public landing grounds (Class C) is also discussed.

THE ORIGIN OF THE POPULATION OF ESBJERG. By Aa. Aagesen. *Geografisk Tidsskrift*, 1944-45, 47 : 92-111. English summary : 111-113.

VITICULTURE IN BELGIUM. By S. W. E. Vince. *Geographical Journal*, 1946, 107 (*3-4*) : 135-140. 2 figs.

GEOGRAPHICAL FACTORS IN THE INVASION AND BATTLE OF NORMANDY. By A. Davies. *Geographical Review*, 1946, 36 (*4*) : 613-631. 4 figs.

TOWNS OF BRITTANY. By A. Meynier. *Annales de Géographie*, 1946, 55 (*299*) : 178-187. 3 figs.

THE RAILWAY FROM PARIS TO TOULOUSE : A GEOGRAPHICAL STUDY. By Ph. Duchemin. *Annales de Géographie*, 1945, 53-54 (*296*) : 274-293. 4 figs.

MITTELEUROPA IN GERMAN POLITICAL GEOGRAPHY. By H. C. Meyer. *Annals of the Association of American Geographers*, 1946, 36 (*3*) : 178-194.

GERMAN GEOGRAPHY : WAR WORK AND PRESENT STATUS. By T. R. Smith and Ll. D. Black. *Geographical Review*, 1946, 36 (*3*) : 398-408.

THE PLATEAU OF VALENSOLE. By J. de Beauregard. *Revue de Géographie Alpine*, 1947, 35 (*1*) : 63-110. Map (1 : 320,000).

A study of the topography, structure, climate, and vegetation of the region between Le Verdon, a tributary of the Durance, and Digne, capital of the département of the Basses-Alpes.

ALSACE-LORRAINE : A BORDER PROBLEM. By L. A. Garloch. *Journal of Geography*, 1946, 45 (*7*) : 268-279.

THE EMIGRATION OVERSEAS FROM SWITZERLAND, 1887-1938. By G. Lobsiger. *Le Globe*, 1946, 85 : 31-62. 16 figs.

A detailed statistical study, illustrated with maps and graphs.

FORESTRY CONDITIONS IN THE CANTON OF NEUCHÂTEL. By J.-L. Nagel. *Bulletin de la Société Neuchâteloise de Géographie*, 1946, 52 (*1*), N.S. No. 4 : 77-98. 4 figs.

ON THE CAUSATION OF EARTH TREMORS IN THE HAUT-VALAIS. By F. Montandon and W. Staub. *Le Globe*, 1946, 85 : 63-83. 2 figs.

Discussion on the relation between Alpine tectonics and seismic disturbances, with a chronicle of earth tremors in Valais since A.D. 1295.

ITALIAN BOUNDARY PROBLEMS : A REVIEW. By G. Kiss. *Geographical Review*, 1947, 37 (*1*) : 137-141. Map.

THE NATURAL STEAM AT LARDERELLO, ITALY. By W. D. Keller and A. Valduga. *Journal of Geology*, 1946, 54 (*5*) : 327-334. 4 figs.

The natural steam vents or *soffioni* of Tuscany and their exploitation are described and illustrated. At Larderello, over 100,000 kw. of electric power were generated in 1941. In addition, large quantities of borax and other chemicals were obtained from the vapour.

ON THE FORMATION AND AGE OF BALATON LAKE. By B. Bulla. *International Review of the Hungarian Geographical Society*, 1943, 71 (*1-2*) : 1-24. Sketch map.

ASIA

SYRIA AS THE GATEWAY BETWEEN EAST AND WEST. By Sir Leonard Woolley. *Geographical Journal*, 1946, 107 (*5-6*) : 179-190. 6 photographs. Map.

CHALDEAN COMMUNITIES IN KURDISTAN. By A. H. Gransden. *Journal of the Royal Central Asian Society*, 1947, 34 (*1*) : 79-82. Map.

A note on the adherents of the Chaldean Uniate Church, particularly the Assyrians of northern 'Iraq.

A VISIT TO SOUTHERN KURDISTAN. By W. Rajkowski. *Geographical Journal*, 1946, 107 (*3-4*) : 128-134. 6 photographs. Map.

MARSH PEOPLE OF SOUTH 'IRAQ. By Lady Dower. *Journal of the Royal Central Asian Society*, 1947, 34 (*1*) : 83-90.

SOUTH-WEST PERSIA : A SURVEY OF PISH-I-KUH IN LURISTAN. By J. V. Harrison. *Geographical Journal*, 1946, 108 (*1-3*) : 55-70. 6 photographs.

THE AGE, ORIGIN AND CLASSIFICATION OF THE RIVERS OF INDIA. By H. L. Chhibber. *Bulletin of National Geographical Society of India*, 1946, No. 1 : 1-9. 1 sketch map.

SOME ASPECTS OF THE HUMAN ECOLOGY OF SOUTH-EAST ASIA. By E. H. G. Dobby. *Geographical Journal*, 1946, 108 (*1-3*) : 40-51. 5 maps. Discussion : 51-54.

The paper refers specially to Malaya, and is illustrated by maps showing land utilisation and the distribution of the Malay, Chinese, and Indian population. The geographical factors producing a convergence of people in south-east Asia are discussed.

TWO NEW RAILWAYS IN SOUTH-EAST ASIA. By R. Rees Rawson. *Geographical Journal*, 1946, 108 (*1-3*) : 85-88. Map.

A note on the Burma-Siam and Kra Isthmus railways constructed during the Japanese occupation.

MINERAL RESOURCES OF INDO-CHINA. By E. W. Miller. *Economic Geography*, 1946, 22 (*4*) : 268-279. 9 figs.

NOTES ON THE PLEISTOCENE GLACIATION OF THE SOUTH CHINESE-TIBETAN BORDERLAND. By J. Hanson-Lowe. *Geographical Review*, 1947, 37 (*1*) : 70-87. 18 figs.

PRECIPITATION IN THE SOUTH CHINESE-TIBETAN BORDERLAND. By A. Lu. *Geographical Review*, 1947, 37 (*1*) : 88-93. 2 figs.

CLIMATE AND MAN IN CHINA. By Chi-Yun Chiang. *Annals of the Association of American Geographers*, 1946, 36 (*1*) : 44-73. 25 figs.

GEOGRAPHY AT JAPANESE IMPERIAL UNIVERSITIES. By R. C. Klove. *Science*, 1946, 104 (*2704*) : 394-395.

JAPANESE EARTHQUAKE OF DECEMBER 21, 1946. By E. Tillotson. *Nature*, 1947, 159 (*4028*) : 72.

GEOLOGY AND STRUCTURE OF THE SOVIET ARCTIC. By P. George. *Annales de Géographie*, 1946, 55 (*298*) : 112-123. Map (1 : 35,000,000).

ADMINISTRATIVE DIVISIONS OF THE SOVIET ARCTIC AND SUBARCTIC. By B. Roberts. *Polar Record*, 1946, 4 (*31*) : 320-323. Map.

ERUPTION OF THE AVACHA VOLCANO, FEBRUARY 25, 1945. By S. N. Glavatskii and I. I. Lagunov. *Izvestiya Vsesoyuznogo Geographicheskogo Obshchestva*, 1946, 78 (*3*) : 273-278. 4 photographs.

The earliest record of an eruption of Avacha (2725 m.), in Kamchatka, dates from 1737, and about ten or eleven eruptions were observed in the 18th and 19th centuries. Major explosive eruptions took place in 1901, 1909, 1910, 1926-27, and 1938, followed by fumarole activity. In December 1944 violent earth tremors were recorded at Petropavlovsk, and activity of the Mutnovskii volcano preceded the major eruption of Avacha described in the article.

AFRICA

RECENT STUDIES OF THE CLIMATE OF NORTH AFRICA AND THE SAHARA. By R. Capot-Rey. *Annales de Géographie*, 1946, 55 (*297*) : 39-48. 4 figs.

IRRIGATION IN FEZZAN. By M. Mercier. *Annales de Géographie*, 1946, 55 (*300*) : 282-289.

THE CYRENAICA-TRIPOLITANIA BOUNDARY. By E. E. Evans-Pritchard. *Geographical Journal*, 1946, 107 (*3-4*) : 169-170.

HISTORICAL NOTES ON THE PELUSIAC BRANCH, THE RED SEA CANAL AND THE ROUTE OF THE EXODUS. By Aly Bey Shafei. *Bulletin de la Société Royale de Géographie d'Égypte*, 1946, 21 (*3-4*) : 231-287. 13 figs. 3 maps. 30 references.

THE POPULATION OF THE EGYPTIAN OASES. By M. Mitwalli. *Bulletin de la Société Royale de Géographie d'Égypte*, 1946, 21 (*3-4*) : 291-312.

The trend of population, distribution and settlement, social organisation, and possibilities of economic development are briefly surveyed.

EROSION AND TECTONICS IN THE EAST AFRICAN RIFT SYSTEM. By F. Dixey. *Quarterly Journal of the Geological Society of London*, 1946, 102 (*3*) : 339-379. Discussion : 379-388. 5 figs. 2 maps. Bibliography.

NOTES ON THE MAGADI SECTION OF THE EASTERN RIFT VALLEY. By P. C. Spink and J. A. Stevens. *Geographical Journal*, 1946, 107 (*5-6*) : 236-241. 1 fig.

THE COLONISATION OF THE NIGER BEND. By J. Gabus. *Bulletin de la Société Neuchâteloise de Géographie*, 1945, 51 (*2*), N.S. No. 3 : 1-41. 11 figs.

AN ECONOMIC SURVEY OF THE WESTERN PROVINCE OF LIBERIA. By E. P. Hanson. *Geographical Review*, 1947, 37 (*1*) : 53-69. 15 figs.

FRENCH EQUATORIAL AFRICA AND CAMEROONS DURING AND SINCE THE WAR. By Ch. Robequain. *Annales de Géographie*, 1946, 55 (*299*) : 188-195. 10 photographs.

THE MATAKAM PEOPLE AND THEIR LAND. By G. Lavergne. *Bulletin de la Société d'Études Camerounaises*, 1944, No. 7 : 7-73. Plate. Map (1 : 300,000).

A study of the geographical environment, history, customs and beliefs of the tribes settled in some eighty villages in northern Cameroons, between 10° 35′ and 11° N., and 13° 40′ and 14° E.

THE WAY OF LIFE OF FOREST PEOPLES IN THE EASTERN CAMEROONS. By J. Despois. *Annales de Géographie*, 1946, 55 (*297*) : 19-38. 4 figs. 1 plate.

THE DETERIORATION OF AFRICAN SOILS UNDER THE INFLUENCE OF COLONISATION. By J.-P. Harroy. *Bulletin de la Société Royale Belge de Géographie*, 1946, 70 (*1-4*) : 69-74.

MINERAL WEALTH OF THE CONGO BASIN. By R. Cambier, *Bulletin de la Société Royale Belge de Géographie*, 1946, 70 (*1-4*) : 3-25.

THE ARAB CAMPAIGN AND ITS GEOGRAPHICAL RESULTS. By Gen. J. Henry de la Lindi. *Bulletin de la Société Royale Belge de Géographie*, 1943 (*1-2*) : 3-37. Sketch map.

The Belgian military operations in E. Congo, 1892-1896, are reviewed, with reference to the resulting addition to geographical knowledge.

THE ORANGE RIVER, SOUTH AFRICA. By J. H. Moolman. *Geographical Review*, 1946, 36 (*4*) : 653-674. 33 figs.

The sources and courses of the Orange River and the Vaal are described, with reference to climate, settlement, and irrigation schemes.

AMERICA

DISSERTATIONS IN GEOGRAPHY ACCEPTED BY UNIVERSITIES IN THE UNITED STATES AND CANADA FOR THE DEGREE OF Ph.D., JUNE, 1935, TO JUNE, 1946, AND THOSE CURRENTLY IN PROGRESS. By L. Hewes. *Annals of The Association of American Geographers*, 1946, 36 (*4*) : 215-247.

A BIBLIOGRAPHY OF CANADIAN PLANT GEOGRAPHY. VII. By H. A. Senn. *Transactions of the Royal Canadian Institute*, 1946, 26 (*1*) : 9-151.

Since 1928, six numbers of this bibliography, begun by John Adams, were issued. The seventh number brings the number of entries to a total of 3562, and includes author, geographical, and plant indices for the period 1635-1935.

TRANS-CANADA AIR LINES. By R. H. Ayre. *Canadian Geographical Journal*, 1946, 63 (*1*) : 2-18. 38 photographs. Map.

AERIAL SURVEYS IN ONTARIO. By J. M. Bishop. *Canadian Geographical Journal*, 1946, 32 (*5*) : 214-225. 27 figs.

THE GROWTH OF LONDON, ONTARIO. By E. Taube. *Canadian Geographical Journal*, 1946, 33 (*3*) : 102-116. 6 figs. 28 photographs.

MAPPING A HUNDRED YEARS OF CHANGE IN THE NIAGARA PENINSULA. By J. W. Watson. *Canadian Geographical Journal*, 1946, 32 (*6*) : 266-283. 9 figs. 15 photographs.

DUAL DRAINAGE ANOMALIES IN THE FAR NORTH. By E. C. Cabot. *Geographical Review*, 1946, 36 (*3*) : 474-482. 7 figs.

Dual drainage (two streams flowing from the same lake) is discussed with reference to its causation by ice or by river capture, and to the resulting explanation of lake and stream patterns at large rock-basin glacial lakes (Great Bear Lake), in esker-kame topography (Northern Labrador), and in the coastal plains of N.W. Canada and Alaska.

EXPLORATION AND SETTLEMENT OF MACKENZIE DISTRICT, N.W.T. By M. J. and J. L. Robinson. *Canadian Geographical Journal*, 1946, 32 (*6*) : 246-255. 13 photographs. 2 maps. 33 (*1*) : 42-49. 5 photographs. 3 maps.

THE WOLF CREEK GLACIERS, ST. ELIAS RANGE, YUKON TERRITORY. By R. P. Sharp. *Geographical Review*, 1947, 37 (*1*) : 26-52. 33 figs.

GLACIER INVESTIGATION IN BANFF, YOHO, AND JASPER NATIONAL PARKS. By W. T. McFarlane. *Canadian Alpine Journal*, 1946, 29 (*2*) : 265-273.

A brief report, recording movements of the Victoria, Yoho, Peyto, Athabaska, Saskatchewan, and Angel glaciers, and notes on the Bow and Balfour hanging glaciers, all accessible from the Banff-Jasper Highway.

AVERAGE DAILY TEMPERATURE RANGE IN THE UNITED STATES. By S. S. Visher. *Bulletin of the American Meteorological Society*, 1946, 27 (*10*) : 594-597. 3 figs.

PRECIPITATION SEASONS IN THE UNITED STATES. By S. S. Visher. *Geographical Review*, 1947, 37 (*1*) : 106-111. 23 figs.

TYPES OF RURAL SETTLEMENT IN COLONIAL AMERICA. By G. T. Trewartha. *Geographical Review*, 36 (*4*) : 568-596. 11 figs.

WESTCHESTER-FAIRFIELD : PROPOSED SITE FOR THE PERMANENT SEAT OF THE UNITED NATIONS. By C. B. Hitchcock. *Geographical Review*, 1946, 36 (*3*) : 351-397. 42 figs. 2 maps (1 : 250,000).

LAND OF THE SMOKIES. By W. W. Burchfiel, Jr. *Journal of Geography*, 1946, 45 (*8*) : 297-308. 5 photographs. Map.

A description of the Great Smoky Mountains National Park on the Tennessee-North Carolina border, extending to over 480,000 acres, and including the wildest highlands east of the Rockies. More than 1500 flowering plants and the great variety of trees growing under natural conditions, an interesting fauna, and fishing facilities, as well as the scenery, attract many visitors—over one million in 1941. Accommodation is provided in adjacent villages, and new cottages and hotels are being constructed each year.

HENNEPIN AND THE DISCOVERY OF THE MISSISSIPPI. By J. Strengers. *Bulletin de la Société Royale Belge de Géographie*, 1945, 67-69 : 61-82. Sketch map.

An account of the North American itinerary of Le Père Louis Hennepin, born in Ath (Hainaut) in 1640, and author of *Description de Louisiane*, published in Paris in 1683.

SPELEOLOGY IN CUBA. The abundance of caves in Cuba favoured the establishment of a flourishing society devoted to their scientific exploration, including hydrography, physiography, mineralogy, biology, palaeontology, and archaeology. This Sociedad Espeleológica de Cuba has now been reconstituted as a branch of the Sociedad Geográfica de Cuba (established in 1914). Particulars are given in an article (*Revista de la Sociedad Geográfica de Cuba*, 1944, 17 (*3-4*) : 49-56) by E. R. de Leuchsenring, which also includes brief notes on twenty-seven caves or cave systems visited by members of the society.

PUERTO RICO : AN INTERPRETATION. By W. H. Haas. *Journal of Geography*, 1946, 45 (*5*) : 178-187. 4 figs.

EARLY SPANISH TOWN PLANNING IN THE NEW WORLD. By D. Stanislawski. *Geographical Review*, 1947, 37 (*1*) : 94-105. 1 fig.

COLOMBIA'S PETROLEUM RESOURCES. By P. R. Griess. *Economic Geography*, 1946, 22 (*4*) : 245-254. 7 figs.

NOTES ON THE WEATHER AND CLIMATE OF SEYMOUR ISLAND, GALAPAGOS ARCHIPELAGO. By L. Alpert. *Bulletin of the American Meteorological Society*, 1946, 27 (*5*) : 200-209. (Rainfall and Vegetation : 206-208.) 3 figs. 10 references.

MÁS A TIERRA, the largest of the Juan Fernández Islands and where Alexander Selkirk lived in complete solitude from 1704 to 1709, is the subject of a photograph and brief note in *Bulletin of the Pan American Union*, 1946, 80 (*9*) : 511.

THE FIRELAND TRIBES OF CHILE. By A. Lipschutz. *Science*, 1946, 104 (*2698*) : 256. [Cf. *S.G.M.*, 1946, 62 (*3*) : 138.]

OCEANIA

JOURNAL DE LA SOCIÉTÉ DES OCÉANISTES, of which the first number was published in December 1945, succeeds the *Bulletin*, of which two numbers were issued in 1937. The fusion of the Société des Océanistes and the Centre d'Études océaniennes du Musée de l'Homme, Paris, 16e, ensures the high scientific standard of this publication and its essential utility as a focal record of information and research on Oceania. The price of the first number ($10\frac{3}{4} \times 7\frac{1}{4}$, pp. 234, illustrated) of the *Journal* to non-members of the Société is 300 francs.

BIBLIOGRAPHY OF OCEANIA, 1939-1944. By É. Reitman. *Journal de la Société des Océanistes*, 1945, 1 (*1*) : 187-231.

Full references to international literature on Oceania during the war years are listed under the following headings : Bibliography, General, Descriptive Geography, Physical Geography, Natural Sciences, Anthropology, Ethnography, Linguistics, Missions, Local History, International Politics, the War in the Pacific, Colonisation and Administration, Economics, Literature, and Arts.

PACIFIC SCIENCE, a quarterly publication devoted to the biological and physical sciences of the Pacific region, is published by the University of Hawaii, Honolulu. The

Editor-in-Chief is Dr. A. Grove Day, assisted by a Board of eleven specialists. The first number (10×7, pp. 62), issued in January 1947, illustrated, contains papers on the distribution of sandalwood on Oahu, on the tsunami of April 1, 1946, on dolomitisation in semi-arid Hawaiian soils, and on the red-billed Leiothrix in Hawaii. There are also notes on the recommendations of the Pacific Science Conference of the National Research Council, on the Micronesian expedition (1946) of the University of Hawaii, and on a survey of Micronesia. The annual subscription is three dollars.

AIR ROUTES OF THE PACIFIC. By M. Dévé. *Journal de la Société des Océanistes*, 1945, 1 (*1*) : 91-111. 2 maps.

THE MARSHALL ISLANDS AND TRANSPACIFIC AVIATION. By A. Spoehr. *Geographical Review*, 1946, 36 (*3*) : 447-452. 1 fig.

BOUNDARY LINES IN THE SOUTH-WEST PACIFIC. By J. Macdonald Holmes. *Australian Geographer*, 1946, 5 (*2-3*) : 52-57. 11 figs.

The complexity of boundary fixation is discussed, and the basic importance of prior geographical studies is stressed.

THE CLIMATES OF NEW ZEALAND : ACCORDING TO THORNTHWAITE'S CLASSIFICATION. By B. J. Garnier. *Annals of the Association of American Geographers*, 1946, 36 (*3*) : 151-177. 4 figs. Climatic data for forty stations in New Zealand.

CHANGES IN POPULATION DISTRIBUTION, 1936-45. *New Zealand Geographer*, 1946, 2 (*2*) : 365-366.

The 1945 New Zealand census figures show an acceleration of the movement of population from rural to urban areas, and the relative decline in population of South Island. Abnormal conditions due to the war and regional trends are briefly discussed.

THE 1945 ERUPTION OF RUAPEHU. By C. A. Cotton. *Geographical Journal*, 1946, 107 (*3-4*) : 140-143. 1 fig. 4 photographs.

LAND UTILISATION IN METROPOLITAN CHRISTCHURCH. By F. Parks. *New Zealand Geographer*, 1946, 2 (*2*) : 279-314. 14 figs.

POLAR REGIONS

NAVAL PARTICIPATION IN THE DISCOVERY OF THE NORTH-WEST PASSAGE. By Commander R. E. D. Ryder, v.c., r.n. *Polar Record*, 1946, 4 (*31*) : 309-314. 3 illustrations.

THE ARCTIC FLIGHTS OF *ARIES*. By Wing-Commander D. C. McKinley, d.f.c., a.f.c. *Geographical Journal*, 1946, 107 (*3-4*) : 90-104. 10 photographs. 2 maps.

TECHNICAL ASPECTS OF THE *ARIES* FLIGHTS. By Wing-Commander K. C. MacLure, a.f.c., r.c.a.f. *Geographical Journal*, 1946, 107 (*3-4*) : 105-126. 15 figs.

A RECENT RUSSIAN FLIGHT TO THE NORTH POLE. By D. Karelin. *Izvestiya Vsesoyuznogo Geographicheskogo Obshchestva*, 1946, 87 (*1*) : 123-124. Sketch map.

A condensed account of the polar flight undertaken under the command of M. Titlov in the twin-engined Douglas H-331 on October 2, 1945. The plane, starting from Cape Chelyuskin, was over the North Pole after a six hours' flight from the northern end of Severnaya Zemlya, and the return journey was made via the New Siberian Islands to the delta of the River Indigirka (150° E.). Fog was encountered on part of the route, but valuable meteorological data were obtained, and ice conditions were recorded by M. Somov, hydrologist at the Arctic Institute. Sixteen polar flights, from Peary's (1909) to Titlov's, are listed.

HIGH LATITUDE FLYING BY COASTAL COMMAND IN SUPPORT OF CONVOYS TO NORTH RUSSIA. By Air Chief Marshal Sir Philip Joubert and Lieut.-Commander A. R. Glen. *Geographical Journal*, 1946, 108 (*1-3*) : 1-21. 6 figs. 11 photographs.

SPRINGS IN SVALBARD. By A. K. Orvin. *Norsk Geografisk Tidsskrift*, 1944, 10 (*1*) : 16-38. English summary. 7 figs. 17 references.

HOPEN. By Thor Iversen. *Report on Norwegian Fishery and Marine Investigations*, 1941, 6 (*6*) : 1-55. English summary : 50-54. 36 figs.

Named Visch Eylandt by Jan Cornelius Rijp in 1596, Hope Island or Hopen has occupied various locations on different charts, and lies about 115 miles east of the South Cape (Sörkapp) of Spitsbergen. In this monograph is described a survey of the island undertaken by the author in 1924 and 1929-1930.

THE DECAY OF NORWEGIAN SETTLEMENTS IN GREENLAND. By W. Werenskiold. *Norsk Geografisk Tidsskrift*, 1944, 10 (*4*) : 157-163.

GENERAL

THE HORIZON OF GEOGRAPHY. By D. Whittesley. *Annals of the Association of American Geographers*, 1945, 35 (*1*) : 1-36.

MEASURING THE SUN'S DISTANCE. By Sir Harold Spencer Jones. *Proceedings of the Royal Institution of Great Britain*, 1946, 33, 1. (*150*) : 36-53.

The sun's distance, measured with an accuracy adequate for all purposes, is 93,005,000 ±9000 miles.

A REVISED ESTIMATE OF THE AGE OF THE EARTH. By A. Holmes. *Nature*, 1947, 159 (*4030*) : 127-128. 1 fig.

After revising previous calculations, Professor Holmes concludes that, "On the evidence at present available, the most probable age of the earth is about 3,350 million years."

JAMES HUTTON'S "THEORY OF THE EARTH," 1795. By S. I. Tomkeieff. *Proceedings of the Geologists' Association*, 1946, 57 (*4*) : 322-328.

ON THE ORIGIN OF CONTINENTS AND OCEAN FLOORS. By J. H. F. Umbgrove. *Journal of Geology*, 1946, 54 (*3*) : 169-178. 4 figs.

GLACIOLOGICAL METHODS. By W. Ahlmann. *Polar Record*, 1946, 4 (*31*) : 315-319.

HAKLUYT AND THE ELIZABETHAN SEAMEN. By E. Lynam. *Geographical Magazine*, 1946, 19 (*8*) : 361-368. 7 illustrations.

SCIENCE TO-DAY is the title of a weekly publication of which the first number was issued October 10, 1946. The first four pages of each issue are devoted to news paragraphs referring to all branches of science, the remaining four pages contain an article which helps to put the shorter items in proper perspective, and brief notes on books. The periodical is not too technical and is designed to keep readers informed of current trends in science. It is edited by A. W. Haslett, M.A., for Weekly Science Newsletter Ltd., 104 Clifton Hill, London, N.W. 8.

WEATHER, a monthly magazine for all interested in meteorology, published by the authority of the Royal Meteorological Society, provides contributions on all aspects of meteorology in a manner which will appeal to non-specialists. The first number (May 1946), with a foreword by Mr. Gordon Manley, and subsequent issues are of interest to a wide circle of readers.

REVIEWS OF BOOKS

EUROPE

The Untutored Townsman's Invasion of the Country. By C. E. M. Joad. 8×5½. Pp. 279. Drawings by Thomas Derrick. London : Faber and Faber Ltd., 1946. 8*s* 6*d*.

This is a strongly written book on a very pressing and topical subject—the preservation of the countryside and of rights-of-way and cross-country routes. Dr. Joad writes from the English standpoint, and certainly the facts of the situation which he gives are sufficiently alarming to demand urgent action. His suggestions are good, albeit pretty drastic at times, and to get them legally adopted will be difficult. The local authorities concerned have the power, but it is only a permissive power, and unless and until pressure can be brought on them to take action, little can be done. The situation in Scotland is not so bad as in England ; but the activities of the Scottish Rights of Way Society are greatly curtailed by the apathy of local authorities, especially in the Highlands.

Dr. Joad gives some excellent and most necessary hints as to how to behave in the country. The town dweller needs to be instructed in the right ways of using the country, just as much as the countryman needs to be instructed in the ways of the town. This book is well worthy of careful study by all who have an interest in the opening up of cross-country routes in England and Scotland.

A. E. R.

The Clyde : The Elusive River. A Roving Survey from Daerhead to the Tail of the Bank. By George Pratt Insh, C.B.E., D.Litt. 7½×5. Pp. 218. 25 photographs. End-paper map. Edinburgh and London : The Moray Press. Third edition, 1946. 8*s* 6*d*.

The first edition (1933), entitled *The Elusive River*, was commended in Vol. 50 of the *S.G.M.* ; a second edition appeared in 1944. Considerable revision and expansion as well as the illustrations in the third edition have greatly enhanced the attractiveness of this book. Once again it may be recommended, particularly to those who are acquainted with Clydesdale and Clydeside.

J. H. K.

The Second City. By C. A. Oakley. 8½×5½. Pp. x+349. 38 plates. Glasgow and London : Blackie and Son Ltd., 1946. 10*s* 6*d*.

The Second City of the Empire and the Sixth City of Europe—this is how the author describes Glasgow, although he admits that these claims may now be disputed. In this excellently written and readable book C. A. Oakley traces its evolution during the last 250 years from a small ecclesiastical and University centre into one of the world's greatest industrial centres.

Scottish history before 1707 largely centred in Edinburgh, while St. Mungo's City played a comparatively unimportant rôle. But the union of 1707, with the opening up of the American colonies to Scottish enterprise, altered the balance. Fortunes were made by the tobacco lords who largely dominated Glasgow in the 18th century, and when the American War of Independence and the Napoleonic Wars shattered their power, the reign of King Cotton began. This in turn yielded to the Mechanical Age ushered in by inventions such as that by James Watt. The 19th century, the Age of Progress, is fully described, as the city, now a mighty seaport, through the deepening of the hitherto sandbank-obstructed Clyde, became known all over the world for its engineering, its heavy iron industries, its shipbuilding yards. Its contributions to Art, Science, Literature and Learning, to Medicine, to Sport and Invention are shown in detail, and when one reads of the great names, one is struck with the variety which forbids us to think of one stereotyped character as typically Glaswegian. To many people the word Glasgow calls up Sir Harry Lauder and other comedians, Jimmy Maxton and the Red Clydesiders, the gangsters with their razor-slashing, its footballers, but over against these are the scientist Lord Kelvin, the Conservative Prime Minister Bonar Law, famous preachers such as Dr. Chalmers, and a host of others.

The author writes of his subject *con amore*, but also with discrimination, and thus, on a broad canvas, we get the picture of a city in its greatness, its squalor, its humour, its pathos, its splendid buildings and its slums. There are many illustrations and some maps, but a good large modern map of Glasgow clearly printed would have been of great assistance to readers not too familiar with the topography of this great city. D. R.

English Lighthouse Tours, 1801, 1813, 1818. *From the Diaries of Robert Stevenson, with his Drawings of Lighthouses.* Edited by D. Alan Stevenson, M.Inst.C.E., F.R.S.E. 7½×5. Pp. ix+70. 19 plates. End-paper maps. Edinburgh : Thomas Nelson and Sons Ltd., 1946. 6*s*.

Robert Stevenson, famous as a civil engineer and more especially as a lighthouse engineer, was one of those remarkably able men of the 18th and 19th centuries. In spite of leading such a busy life as engineer to the Northern Lighthouse Board, during which appointment he travelled extensively, he found time to keep most detailed and technical information in the form of his diaries. When one considers the difficulties under which much of his travelling was performed, sea trips under sail, land travelling on horseback or on foot, his diaries are the more remarkable. During his term of service with the Lighthouse Board he made, in addition to his tours of Scottish lights, three tours (in 1801, 1813 and 1818) of the English and Manx lighthouses, and the diaries of these tours have now been edited by his great-grandson, who, as an experienced lighthouse engineer himself, is naturally the ideal editor of these.

Robert Stevenson's detailed descriptions of the numerous lights he visited and especially his two visits to the Eddystone light are admirable, and his critical remarks on the care of the lights and general cleanliness, or otherwise, indicate the high standard of efficiency he set himself and expected from others. The editor has written an introduction which is invaluable for the proper understanding of much of the technical matter in the diaries, and he has added some further information on the early methods of lighting, together with a list of English and Manx lights of the period.

The book is excellent, and the reader would be well advised to turn to the diarist's famous descendant, R. L. S., and read once more of the building of the Bell Rock lighthouse in *Records of a Family of Engineers*, which gives a very good idea of the character of the man. W. A. F.

The Dartmoor Scene : A Series of Camera Studies between Two Bridges and Postbridge. By Kenneth F. Day. Foreword by Eden Phillpotts. 8½×5½. Pp. xi+57 photographs. End-paper sketch maps. London : Frederick Muller Ltd., 1946. 7*s* 6*d*.

It is fitting that these good camera studies are dedicated to the novelist who has verbally portrayed the Dartmoor scene and who now contributes an appreciative foreword. The pictures, taken over a number of years, represent the central part of Dartmoor, and are accompanied by happily phrased explanatory notes, together with apt quotations from *The River*. They help to convey Mr. Day's impression that "some would call Dartmoor repellent and unfriendly, but to those who can appreciate its austerity it is a tonic force that can refresh and renew both mind and body. It is interesting in all seasons and in all weathers. . . ." J. H. K.

In the Kingdom of Kerry. By RICHARD HAYWARD. $8\frac{3}{4} \times 5\frac{5}{8}$. Pp. x+350. 109 drawings by Theo. J. Gracey. Map and end-paper map. Dundalk : W. Tempest, The Dundalgan Press, 1946. 17*s* 6*d*, or post free 18*s*.

A remarkable and a pleasing book : an enthusiastic account by a " mere Northerner," an Ulsterman, of the lovely and colourful south-west corner of Ireland. It is full of topographical information, of picturesque description of scenery, of local history and folklore, all set down with the vision of the poet and painter interested as much in the kindly people and charming landscape as in the archaeology and the old stones of Kerry. One very satisfactory feature is the treatment of place-names : first, the accepted English version is given, then the original Irish form, and finally, an exact translation of this, so that the general aptness of the names is revealed.

There are two maps, both useful, but it is a pity that in the folding map of Kerry roads and railways are not indicated. The author, who has written many books on various parts of Ireland, north and south, is most fortunate in his illustrator, for the numerous drawings that adorn this book could hardly be more sympathetic. R. T. C.

The Northern Tangle : Scandinavia and the Post-War World. By ROWLAND KENNEY. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. xii+255. 8 maps by J. F. Horrabin. London : J. M. Dent and Sons Ltd., 1946. 12*s* 6*d*.

The author of this book is qualified by thirty years of close contact with his subject. That his title is appropriate will be appreciated by all who read the first sixty-five pages, which deal with the history of Denmark, Norway, Iceland, Sweden, and Finland from 800 to A.D. 1914. It becomes even more suitable in the remaining three-fourths of the book, devoted to relations with Europe from 1914 to 1940 and to the miseries and heroisms of the last war. The German occupation appears at last to have convinced Norwegians and Danes of the naïveté of their faith in neutrality and of its bankruptcy in the modern world ; but the author rather fears that already in 1945—his postscript is dated January 1946—the sense of their share of responsibility for the defence of freedom was beginning to fade. As for Sweden, although the discussion of this part of the theme is as fair and objective as is the book in general, one is tempted to sympathise with the view of a Norwegian quoted, that " the Swedes who were most guilty of the pro-German policy will soon be claiming that Swedish neutrality gave the Allies the victory." The inclusion of Finland in this enquiry is justified by its history and by its contemporary political attitude, which has, however, inevitably drawn it out of its orbit.

The general conclusion as to the future of Scandinavia is that there is little prospect of the early formation of any exclusively Northern coalition, that Sweden is, now as always, opposed to the idea of association with any bloc of powers, and that Scandinavians of vision dream not of an isolated union, but of a Northern union within an international organisation. R. T. C.

The Faroes in Pictures. By GORDON HUSON. 7×9. Pp. 82. 65 photographs. Map. Drawings by Owen P. A. Evans. London : George Allen and Unwin Ltd., 1946. 10*s*.

A well-produced little album containing excellent photographs and some very pleasing drawings. The illustrations are chosen and arranged systematically to illustrate most aspects of the Faroes, their folk and their wild life. The accompanying text, though brief, gives a lively impression of the islands.

There is a useful appendix with statistics and a short bibliography, but the map, though reproduced from a G.S.G.S. publication, is somewhat disappointing. R. M.

Den danske Dyreverden, dyrgeografisk og invandringshistorisk belyst. By RAGNAR SPÄRCK. 10×7. Pp. 116. 33 figs. København : Ejnar Munksgaards Forlag, 1942. 7.50 *Kr.*

This volume deals with the Danish fauna, but the subject is treated in an unusual way. The author takes the fauna as it is at present, and then proceeds to show how it has been built up from several sources. The volume is divided into a number of sections dealing, in turn, with various aspects of the problem : a general survey of the status of certain species to-day on land and in fresh water ; the southern, eastern, and western species and their distribution ; glacial relicts of various types ; the marine fauna ; and, lastly, a general summary and analysis of the present distribution of certain species, selected by the author as evidence to support his conclusions as to the immigrations which have taken place from time to time.

The book is a very interesting one, and the author is to be congratulated on an illuminating survey of the Danish fauna and its origins. The volume is well printed, and the numerous maps showing the present distribution of the main critical species treated in the text, add much to the interest and clarity of the discussion. The question of the Danish fauna and its origins is one which will interest geographers and zoologists alike, but the fact that the book is written wholly in Danish will make it inaccessible to many who would otherwise wish to consult it. It is to be hoped that a translation will be issued of this important contribution to zoo-geography. A. C. S.

France économique et humaine. By Albert Demangeon. $11\frac{1}{4} \times 7\frac{3}{4}$. Pp. 459. 170 figs. 133 photographs. Map. Géographie Universelle, tome VI, 2me partie. Paris : Librairie Armand Colin, 1946. 900 *fr.*

Written prior to 1939-40, this great work presents the peace-time position of France, economic and human. The book is built in four parts : France in Europe and the world ; agricultural economy in rural life ; the major agricultural regions ; and routes and transport. A significant omission is a study of urban economy and society, even the regional chapters having little to say upon the growth of towns, their functions, products and populations. One would expect greater originality in the rural chapters than in the urban chapters, were these to be found, but the absence of city study is surprising when one remembers the contributions by the French, including Demangeon, to the geographical study of cities.

Following the introductory pages which take up the thread of de Martonne's *France physique*, Demangeon notes three leading traits of French civilisation : France's limited faculty of peopling other lands, its stoutly maintained peasant heredity and tradition, and the long continued tradition of manufactures of high quality rather than great quantity. Demangeon links this tradition with France's notable rôle in occidental civilisation, world leadership. This rôle he explains by these three traits and by " the multiplication of the forces of civilisation which result from a long and careful adaptation to geographic conditions . . .," notably the elaboration of agricultural technique in plain and mountain, and the secular utilisation of natural routes linking southern to northern culture. But France's rôle is also to be explained, one feels, by its harmonious link of town and country, of ancient Gallic tribal centres renewed by the early, free development of Christian civilisation during the first flower of Western Catholicism, of which the visible achievement stands in the glory of their cathedrals. During the Renaissance, France's architecture was not only palatial but civic ; and though both Napoleons replanned Paris for tyranny rather than civic renewal, the result is the orderly and frequently impressive aspect of French cities.

During the last hundred years, commerce and industry brought on the growth of towns until their population exceeds that of the diminishing French villages and farms. The urban aspects of French civilisation called for greater notice, to give a balanced account. Nevertheless, Demangeon's contributions to the comprehension of rural life have been so great that readers will welcome this, his final synthesis. It is a loss not only to France but to Franco-British understanding that he died in 1940. Demangeon's *France, économique et humaine*, seen through the press by A. Perpillou, is an outstanding addition to the series *Géographie universelle.*

A. G.

Czechoslovakia : Land of Dream and Enterprise. By Jan Čech and J. E. Mellon. Preface by Wickham Steed. $8\frac{3}{4} \times 5\frac{5}{8}$. Pp. 184. 153 illustrations. Map. London : Lindsay Drummond Ltd., 1944. 15*s.*

Czechoslovakia. By Commander Edgar P. Young, R.N. $8\frac{1}{4} \times 5\frac{1}{2}$. Pp. 118. Map. Citizens of the World Series, No. 1. London : St. Botolph Publishing Co. Ltd., 1946. 3*s* 6*d*, cloth 5*s.*

Czechoslovakia has often been described as a bridge between East and West, but in a Europe torn by conflict and dissension a bridge easily becomes a bridge-head, where first one and then the other antagonist gains the preponderating influence. Long traditions whose roots go deep into the times when Bohemia was an independent kingdom are not obliterated by changing circumstances, but their mode of expression cannot but be profoundly affected by the experiences of the seven years between the death of the first republic at Munich and the birth of the third republic after the withdrawal of the German armies.

The two books under review have little in common. The first is descriptive of the life of the people, both rural and urban, well illustrated with photographs, with emphasis on the traditional ; the second is factual with emphasis on the new constitution and the social and economic structure. The first is written by two Czechs with a deep desire to show their country to British people ; the second is written by an Englishman with a faith in the destiny of Czechoslovakia which sometimes blinds him to some of the questionable actions of the new Government, such as the expulsion, under conditions which even the authors of the Potsdam agreements did not anticipate, of people of German descent. The authors of the first try to avoid hurting British feelings by making only a slight reference to Munich ; the author of the second strips that unholy agreement of any pretence and shows how the ' crisis ' was largely engineered to save Hitler from crashing, and how Chamberlain and Daladier warned Beneš that they would give Hitler their full support if his demands were resisted.

The effect of Munich can be seen in many of the features of the new constitution, and the re-orientation of Government policy towards the East rather than towards the West is largely attributable to it. But although the ' iron curtain ' has advanced to the western frontiers of Czechoslovakia the devotion of the people to personal freedom may help the country to become an even stronger bridge between East and West than it has been heretofore.

S. C. F.

The Glory that is Greece. By PHILIP PANETH. 7½×5. Pp. 139. London: Alliance Press Ltd., N.D. 8*s* 6*d*.

Whilst this volume does not contain anything of geographical interest, it does give in a clear and succinct form the part played by Greece in the war against the Axis powers, and reveals how gallantly she repulsed the first attacks and made her further contribution by delaying and upsetting Axis plans. The author sees in her fight for liberty the resurgence of the old Greek spirit that gave rise to democracy. Though the shortage of paper is responsible for belated appearance of the book, the delay has enabled Mr. Paneth to add some later information about the different groups within Greece who strive for political dominance, and for this the general reader will thank him. J. R.

ASIA

The Story of Burma. By F. TENNYSON JESSE. 7½×5. Pp. xiii+206. 8 illustrations. End-paper map. London: Macmillan and Co. Ltd., 1946. 10*s* 6*d*.

This is essentially "the story of Burma in regard to ourselves," told with sympathy and understanding, in a fresh, vigorous style entirely free from pedantry, and often illumined by a flash of humour. The author brings to her task the quality of sane judgment, born of a first-hand acquaintance with the Burmese and their country.

The first part gives the main trends in Burma's history, especially as it impinges on Britain, up to the annexation of 1885. The second part shows the results that stemmed from this action, and the transformation effected in all walks of Burmese life through the contact with west European civilisation. Here, with a minimum of statistics and a great fund of human understanding, the author presents the Burmese at work and play; explains the significance of their religion, putting it in the real perspective of their daily lives; and discusses vital aspects of their education, health services, economy, legal code, and art. The author does not pretend to have treated her subject exhaustively, or to have pronounced the last word. She "introduces" the problems, giving the basic facts, and then leaves them open for discussion.

Having completed her book in May 1945, she does not treat of particular developments, such as the rôle of the Anti-Fascist Freedom League, or the deepening of the content of the national independence movement, resulting from the anti-Japanese struggle. The supreme merit of her book is that it provides that essential basis of general or "background" knowledge which can lead to a more intelligent appreciation of the problems that now confront Burma and, indeed, the whole Far Eastern world. R. S. G.

Portrait of the Dalai Lama. By Sir CHARLES BELL, K.C.I.E., C.M.G. 8¾×5⅝. Pp. 414. 49 plates. End-paper maps. London: William Collins, Sons and Co. Ltd., 1946. 21*s*.

The Dalai Lama is the chief priest of the Buddhists in Tibet and, since they believe in the transmigration of souls in rebirth after rebirth, the Thirteenth Dalai Lama of this book is the twelfth reappearance of the First, and this being so, he is but the First appearing again. The signs by which new investments are recognised, the manner in which the new Dalai is groomed for his high office, and his acquittal as spiritual and temporal head of the subjects of Tibet and the adjacent lands are set out by the author in a simple factual style which fascinates.

The book reads like a play wherein the two men, subject and author—the latter with the most sympathetic understanding acting the part of teacher and guide to the outer world—work for happiness at home and peace abroad in an atmosphere of local suspicion and intrigue, yet with good intent, against a background of rivalries between the Chinese, the Russians, the Tibetans themselves and the British. In this sense the book is more political than geographical but, through the scholarly presentation of many other sides of Tibetan life, it amounts to a very well-balanced history of the area for the past fifty years or so and as such is of interest to every student of world affairs.

The story of how these two men fell heir to their offices, were trained for them and established so great an understanding and friendship as the years went by, resulting in the fulfilment of their endeavours and the tasks imposed upon them, suggests predestination. Indeed the Tibetans firmly believe that this was so. During his twenty-one years of service in the Indian Civil Service the author spent only seven months in England and one in Canada, with occasional absences in India, China and Japan. "Except for those periods I lived in Tibet and its borderland," he says, and *that* is sufficient commentary upon his interest, knowledge and ability.

It is a book to make us proud, for in it Sir Charles Bell shows how the high tradition of the I.C.S. is developed and maintained, but in his case in a field which was more strange and involved than falls to the worker in any of India's provinces. It will be interesting to compare this book with a similar one after the space of another twenty-one years. R. E. C.

Old Korea : The Land of Morning Calm. By Elizabeth Keith and Elspet Keith Robertson Scott. Notes by Bishop Cecil, the late Dr. James Gale, M. Yanagi, Dr. Frank Schofield and Dr. Alice B. Appenzeller. 11×8½. Pp. 72. 16 colour prints. 24 water colours in monochrome. London : Hutchinson and Co. (Publishers) Ltd., 1946. 42*s.*

At a time when all over the world principalities and powers are engaged in asserting their independence, such a publication as *Old Korea*, " the land of morning calm " as that country has been styled, is of special value, not alone for the information it imparts of a region little known to the western world, but also for the artistic presentation of native life, scenes, and characters. The work of two sisters, it deals with a period from 1905, when the calm of Korean life was rudely disturbed by the Japanese who, in addition to brutally murdering the Empress Min, a woman of great intelligence, made every effort to suppress native customs, traditions and language. We are told of the culture of the Korean people, how in 1460 a simple script was evolved by them unlike the complexities of either Chinese and Japanese—which rendered the language of easier approach for Westerners—, of the independence movement carried out in 1919 with dignity and lack of rancour in spite of unspeakable tortures to the inhabitants, many of whom sought refuge in Honolulu. We are shown the daily activities of the people, their recreations, the artistic productions of their artisans in pottery, lacquer work, and house furniture of an art entirely their own.

The book is copiously illustrated in colour and black-and-white sketches, and the high artistic merit of those illustrations adds greatly to the value of a record of the days that are past. E. R. C.

Modern Korea. By Andrew J. Grajdanzev. 9×6. Pp. x+330. 6 maps. Bibliography. New York : Institute of Pacific Relations ; The John Day Company, 1944. $4.00.

Commencing with a brief statement of the geographical setting, and a short account of Korea's history, this book describes contemporary Korea, and particularly the conditions of agriculture, industry and economics as they were changed by the effort of Japanese imperialism. The book concludes with a short, but far-seeing, outline of the problems of Korean independence and the principles of their solution.

The author makes full use of official statistics and of an extensive and up-to-date bibliography. Thanks to his penetration, to his clean-cut style and orderly arrangement, the result is a fascinating book. Mr. Grajdanzev's analysis, not merely of Japanese propaganda but of ' authoritative ' American writers, is little less than devastating. He shows how many writers in America, like too many in Britain, were taken in by the façade of Japanese ' efficiency and progress.' Such writers failed to enquire into the changes in the condition of the people, changes for the worse for all Koreans except the quislings of commerce, landowning, and administration. Mr. Grajdanzev helps us to assess the relative benefits or exploitation due to Japanese rule. In this way, it may be remarked, he may help us to form a corresponding assessment of Occidental rule in Asia.

Finally, of the influence of the colonial regimes in Korea, Formosa—and, later, in Manchuria—on Japan itself, Mr. Grajdanzev writes trenchantly : " It is clear that the enslavement of the Koreans and the Chinese had much to do with the strangulation of the weak shoots of Japanese liberalism. It was in . . . Korea and Manchuria that the Japanese army built its organization, acquired the taste to rule over aliens, and ripened fascist ideology and plans of further conquest." A. G.

AFRICA

South of the Sahara. By Attilio Gatti. 8¾×5⅝. Pp. 240. 33 illustrations. London : Hodder and Stoughton Ltd., 1946. 21*s.*

There must be some truth in the old Arab proverb that " he who drinks the waters of Africa, thirsts, and drinks again," for Commander Gatti admits that the subject matter of his book is the result of his tenth expedition. He has, therefore, had long and intimate association and experience of the country. His interests are natural history, and he finds his richest material amid the dense forests of pygmy land in the north-eastern parts of the Belgian Congo. There he finds new and strange forms : pygmy antelope, buffaloes, and elephants ; giant beetles the size of pigeons ; and the okapi and the giant gorilla. To study these in their natural habitat involved long and arduous journeys, but he was successful in securing specimens for the zoological gardens of Europe and America.

Apart from this special work, he has added much information on the social life of the peoples he encountered, including the Atussi of Ruanda, a people of Nilotic strain. The Atussi are giants ; seven feet nine inches is the average height, whilst some occasionally are over eight feet, and one has been known to reach eight feet nine inches. Their national sport is high jumping, and the author witnessed one jump eight feet one inch. They would appear to be quite a superior race and in courtliness and manner of life, outstanding.

Commander Gatti, who started this expedition in 1938, had to bring it to an abrupt end in 1939. He writes easily and interestingly, and the photographs, which are excellent, add much to the value of the book. J. R.

John Shedden Dobie : South African Journal, 1862-6. Edited by ALAN F. HATTERSLEY. 8½×5½. Pp. xxiv+207. 14 illustrations. Sketch map. Cape Town : The Van Riebeeck Society, 1945.

John Shedden Dobie was born in Beith, Ayrshire, in 1819. Though intended for the law, he preferred adventure in the southern hemisphere, and from 1840 till 1870 pioneered in Australia, South Africa and South America, before returning to the Morishill estate he inherited through his mother. There in his later years, until his death in 1903, he continued his father's antiquarian activities. During 1862-6, he travelled widely in Natal and Cape Colony, for part of the time dealing in sheep. Throughout these years, he kept a journal illustrated with pencil sketches. Originally in several note-books, this narrative was in later leisure transcribed into MS. volumes in " more presentable form for any friend who might wish to look at them." From a holograph copy taken to South Africa in 1930, the Professor of History at Natal University College has prepared the present publication, by excising about half the original material and summarising the remainder to preserve the continuity of the narrative. Many of Dobie's sketches are pleasingly reproduced in half-tone.

In these diary entries the pioneer's life is recreated with vivid authenticity. For all interested in the early development of South Africa, especially the part played by Scots, this volume will be welcome. The careful editorial additions, mainly in the form of biographical footnotes of persons met by Dobie, and often specifying the British homes from which these early settlers came, add to its merit.

A short biography of Dobie is included, accurate but for two minor details (Morishill is near Beith, not Leith—surely a misprint ; and *Cuninghame Topographized* did not remain in MS. but was published by John Tweed of Glasgow in 1876), ensuring that the volume is complete as historical scholarship could make it. But in this *Magazine* it may be permissible to regret the absence of a geographer as collaborator during editing. The only map provided is a contemporary sketch of Pondoland, which, reproduced in half-tone, is largely illegible even under a magnifying glass and gives no help in following Dobie's route. An additional essay describing the geography of the colonies about 1860, illustrated by a map compiled from all available contemporary sources, and showing Dobie's travels, would have greatly enhanced the value of this book to students of historical geography. J. H. G. L.

AMERICA

Economic Geography of Canada. By A. W. CURRIE. 8½×5½. Pp. xiv+455. 24 maps and diagrams. Toronto : The Macmillan Company of Canada Ltd., 1945. 16*s*.

This volume is a very welcome addition to the geographical literature on Canada, and has a wealth of references for more detailed study. The keynote to the content of the book is found in the Introduction : "A knowledge of what these Dominions (Canada and Newfoundland) have in the way of natural resources, of how these are being used at present and of attempts toward the better use of these resources, is a prerequisite to intelligent national planning for the future."

The unit of study is the Physiographic Region of which there are seven (Acadian-Appalachian, St. Lawrence Lowlands, Prairie Region, the Cordillera Region, the Canadian Shield, Mackenzie Valley and Hudson Bay Lowlands, the Tundra). There is an additional chapter on Newfoundland. In each Region the economic activities of man are studied, not merely against his strictly geographical environment but against his total environment. Factors such as religion, subsidies, commercial organisation, etc., though not geographical in themselvex, have, in many cases and places, geographical significance and may help or hinder economic development. As might be expected, great attention is paid to the influence of the " market." J. Y. E.

The Lure of Montreal. By W. P. PERCIVAL. 8×5½. Pp. xi+240. 51 illustrations. End-paper sketch plan. Toronto : The Ryerson Press, 1945. $3.50.

The author of this comprehensive work accumulates a great fund of interesting information regarding the history and development of the wealthiest city and financial centre of Canada. But Montreal is more than worthy of all Dr. Percival has to say of it. Perhaps something is even missing of nourishing atmosphere in his method of presenting a work " intended as a guide which can be used directly . . . for the tourist to carry round as he does a catalogue." Montreal is not only the fifth largest city in North America. It is a very beautiful city, with an atmosphere of health and great vitality, which seems to be a spirit wafting from the great spaces out-of-doors to make of it an imposing stepping-off place to the wonderland beyond. If one grasps the vast prospect of the Dominion as a whole, one glimpses some of the character of Montreal as a city—big, ranging, impressive : a new growth, an abundance of man's making, resulting from the first flush of wealth drawn from a rich new world.

Having lived some years in Montreal, the reviewer confesses to high and lasting regard for this very magnificent city, of which Dr. Percival writes from a great store of knowledge,

and with scholarly thoroughness, for the enlightenment of others. The book is well illustrated with photographs, but it seems a pity a detailed map of the city has not been included. A. B.

Eskimo Summer. By DOUGLAS LEECHMAN. 8×5. Pp. ix+247. 9 photographs. Sketch map. Toronto : The Ryerson Press, 1945. $2.50.

There is much charm in Mr. Leechman's straightforward narrative of his summer spent on archaeological investigation with the Eskimos of Port Burwell, on Killinek Island at the extreme tip of the Labrador. Mr. Leechman's search for ancient Tunnit (Cape Dorset) material took him to the out-of-the-way Button Islands, but he was not rewarded by any very important discoveries until he returned across the dangerous tide-rips of Gray Strait to Killinek and went south-west across McLelan Strait to a site on the opposite shore at Nunaingok, " The Hidden Land." Here Cape Dorset material was found in some quantity in an old refuse dump. It is not, however, the archaeology which is the important part of this book. It is rather the faithful and direct transcription of life amongst the kindly Eskimos who helped him in his work.

Mr. Leechman makes no pretensions to fine writing, but the essence of his style is a direct simplicity reminiscent of W. H. Hudson. The book shows signs of too hasty revision. There are numerous typographical errors, such as Cape ' Childey ' (p. 271), which should read ' Chidley.' Besides the detailed map of Killinek and the Button Islands as frontispiece, a map showing their general situation in regard to Hudson Strait and Canada would be very desirable. I. W. H.

Alaska : Promyshlennik and Sourdough. By STUART RAMSAY TOMPKINS. 8×5½. Pp. xiv+350. 27 illustrations. 8 maps. Bibliography. Norman : University of Oklahoma Press, 1945. $3.00.

There are few countries which have a story so varied and thrilling as the comparatively recently discovered land of Alaska. Dr. Tompkins has done it full justice in his searching and scholarly history, which is one of the most valuable additions yet made to the literature of the Territory.

Beginning with the story of the Siberian merchants who first broke the Russian trail to the Far East, he has delved into little-known Russian archives, and in his earlier chapters he has filled in gaps in our knowledge of the men who immediately followed the great Captain Vitus Bering in the early exploration (and exploitation) of the Aleutian Islands and the western extremities of the Alaskan mainland. Though it may be questioned if the author is right in identifying the island of Kiska with Bering's St. Stephen Island (F. A. Golder in Bering's published log-book gives cogent reasons for assuming that St. Stephen was Buldir Island, and Kiska the St. Markiana, first sighted and named by Bering on 25th October 1741), it is pleasant to find Dr. Tompkins giving to Captain Cook his belated due as the man who first dispelled many illusions regarding the shape of the north-eastern extremity of Siberia, and whose conjectures, since proved to be correct, entitle him not improperly to the credit " of having proved the separation of the two continents and having correctly described the northern coasts of the continents on either side of the Bering Strait."

From Russian times Dr. Tompkins traces the story of Alaska to its purchase by the United States in 1867, the details of which are dealt with faithfully, as are the clashes between Britain and the United States over the Alaskan boundary. The final chapters bring the interesting story up to present times and the building of the Alaskan highway. It was pointed out by the Governor of Alaska (Dr. Ernest Gruening) in 1941, that the problem of Alaska to-day is " that of a raw materials country whose natural resources are being stripped from it with wholly inadequate return for the great riches extracted." Dr. Tompkins looks forward to the day when it will be inhabited by a race who will live in the country because they prefer it and who will develop rather than exploit its resources.

Not the least valuable part of this valuable book is an extensive bibliography. There is also an index and the book is well illustrated. Though there are several maps, a comprehensive map of the whole Territory would make a helpful addition to a volume which should become a standard reference work on Alaskan history. I. W. H.

Caribbean : Sea of the New World. By GERMÁN ARCINIEGAS. Translated from the Spanish by Harriet de Onís. 8½×5½. Pp. xi+464+xiv. 16 illustrations. Sketch map. New York : Alfred A. Knopf Inc. ; Toronto : The Ryerson Press, 1946. $3.75.

A penetrating well-balanced and colourful study ; a translation both faithful and vivid. To a Scottish student, it is a reminder of the international aspect of the Darien project to find the story of the ill-fated expeditions set against the general background of Caribbean history ; while to the student of American history as well as to the student of European history, the emphasis laid on the close connection between the great movements of the Old World and the New is symptomatic of that broadening of the historical outlook which of recent years has added very greatly both to the general attractiveness and to the intellectual appeal of historical studies. G. P. I.

Cities of Latin America : Housing and Planning to the South. By Francis Violich. 9×6. Pp. xii+241. Illustrated. New York : Reinhold Publishing Corporation, 1944. $3.50.

The author states that " this book is about Latin American cities, their function for the urban dweller and how this function may be guided." In considering only town planning he limits himself to a secondary aspect of planning and perhaps inadvertently stresses the real difficulty in Latin America—a concentration on big city planning when regional planning is required to resolve the growing problems of lack of balance between the big cities and their hinterland, which must be solved before town planning has any validity. Perhaps the author realises this fact too, when he later states that " the Incas were undoubtedly the best planners South America ever knew." For these fabulous people maintained a population of 16,000,000 for over a thousand years by state planning of all land resources for the general welfare throughout the regions in their empire. The conquistadores shattered this civilisation and imposed a system of subjugation and pillage ; followed by missionaries and adventurers who introduced the first planning legislation to the Western Hemisphere, establishing standards of town siting and building irrespective of climate or locality.

Centuries of slow city growth followed until the turn of this century when there was great commercial and urban expansion. And to-day planning problems caused by the rapid movement from an agricultural to an industrial economy and the excessive concentration of population, industry and authority in the big cities are complicated by the appalling standard of living amongst the population masses. A regional development of hinterland and urban activities is required to enable progress to take place throughout the republics ; but the remoteness of natural resources is already enforcing decentralisation. In regional planning progress will be uneven, for extremes of climate and wide geographic variations foster different initiatives and outlooks.

Mr. Francis Violich encourages a strong belief in the future of Latin America. His book is factual and unbiassed, well illustrated and informative to read. R. E. M.

The Argentine Republic. By Ysabel Fisk Rennie. 8½×5½. Pp. xvii+431. 16 photographs. End-paper map. New York : The Macmillan Company, 1945. $4.00.

This is a 'background' book worthy of a place on the bookshelves of an historian if not on those of a geographer. But in that geography is the link between much that is cultural, political, economic and scientific, this history of the modern period in the development of Argentina should be read by geographers. Within the compass of four hundred odd pages there is packed a wealth of historical fact covering the period from about the beginning of last century up to the advent of Perón—a simply amazing amount of research has been done by the author.

Her book throws the clearest of light on the reasons for many actions of the various Argentine governments, with a candour that has often been absent from other reportings. Mrs. Rennie is certainly not biassed in favour of Britain's financial activities in Argentina, nor does she spare the landed aristocracy and the industrial magnates of Buenos Aires—their machinations make almost hair-raising reading. Further, we are here made to appreciate the potentialities of Argentina, and when we remember how far we have been dependent on that country for such primary products as wheat and beef, a perusal of this book, particularly of its last chapters, will assuredly shake our complacency. It would be advisable for anyone connected with Argentine trade to read this arresting and thought-provoking book, and then take stock of his position. A. T. G.

OCEANIA

Pacific Horizons : The Exploration of the Pacific before Captain Cook. By Christopher Lloyd, M.A., F.R.G.S. 8½×5½. Pp. 188. Frontispiece. 6 plates. London : George Allen and Unwin Ltd., 1946. 10*s* 6*d*.

What do most of us know about Pacific exploration before Captain Cook ? In most cases knowledge is limited to the bare facts that Magellan and Drake crossed that ocean. In *Pacific Horizons*, Mr. Lloyd has sought to fill the gap.

European penetration into the Pacific differs from that in other oceans in several particulars. Until Cook's arrival quite late in the day, no navigator stands pre-eminent and neither does any nation. Conquistadores, followed by pirates, played their parts, but traders were almost absent since the Pacific's commercially valuable lands are marginal and could be better approached from other seas. In place of the trader came the scientific expeditions of the eighteenth century. Lastly, the early voyagers all sailed along much the same latitudes, with the result that vast areas remained for long totally unknown.

Pacific exploration was essentially the work of many nations and, except for Drake, the British were late comers. Still, it gives us pleasure to note that Magellan required " Master Andrew of Bristol " to help man the *Victoria*, and that the first Dutchmen carried Englishmen as their pilots. The story of the disappearance of the Solomons from European ken and their accidental rediscovery after two hundred years is an intriguing one.

Pacific Horizons fills a need and is carefully and attractively written, whilst the bibliography shows that the author has referred to an extensive literature for his information. There are, however, two or three shortcomings which might be rectified in a later edition. The general reader will be rather mystified as to why the early voyagers seem so completely tied to much the same tracks and, in particular, why they had so much difficulty in reaching the higher southern latitudes. A paragraph or two on the Pacific wind system would quickly explain matters. A map showing approximate routes of the explorers would be an asset, for few of us know just where to look for such 'specks' as Anaa, Wallis Island, or even the celebrated Tinian. Some of the references in the index appear incomplete. Despite these small points, *Pacific Horizons* can be strongly recommended and deserves every success.

C. R. V. G.

Soil Erosion in New Zealand: A Geographic Reconnaissance. By KENNETH B. CUMBERLAND. $8\frac{1}{2}\times5\frac{1}{2}$. Pp. vii+227. 15 text figures. 60 photographs. Glossary. Bibliography. Wellington, N.Z.: Soil Conservation and Rivers Control Council, 1944.

To the published accounts of soil erosion accelerated by human action in many lands must now be added this admirable description of similar conditions in New Zealand by Mr. K. B. Cumberland, M.A., Editor of the *New Zealand Geographer*.

Describing his work as a "geographic reconnaissance," the author gives a graphic account of changes which have taken place in New Zealand mainly during the past seventy years. Thirty millions of acres of bush land have been reduced to thirteen millions, mainly by axe and fire. Damage by flooding has resulted, and to this must be added the ravages of stock and deer and the misuse of the plough, leading to the erosion of the soil; utter destruction for human purposes of many thousands of acres of land and the impoverishment of many thousands more. Owing to the geological structure of New Zealand, its marked relief and the uneven but heavy rainfall, the erosional effects produced are varied and complex; indeed several of the types described seem to be peculiar to New Zealand.

The diversity of conditions has compelled the author to divide the country into eight regions for descriptive purposes. Then follows an interesting chapter on conclusions, and suggestions for the application of general principles to the particular case, applied cautiously and with reliance on continued research. There are five appendices dealing with special aspects of the problem, a glossary of terms used, a bibliography, and a useful index.

The illustrative maps are clear and the photographs numerous and persuasive. This book is a valuable and welcome addition to the literature of soil erosion. R. M. C.

METEOROLOGY

Cloud and Weather Atlas. By HUGH DUNCAN GRANT. Foreword by James H. Kimball. $10\times7\frac{1}{2}$. Pp. xvii+294. 164 illustrations. 10 figs. 14 charts and tables. New York: Coward-McCann Inc.; Toronto: Longmans, Green and Co. Ltd., 1944; London: George G. Harrap and Co. Ltd. 25*s*.

This atlas contains over one hundred magnificent cloud photographs, mainly from the U.S. Weather Bureau and Army Air Forces, all well produced in black and white on paper of a quality that will excite envy in British publishers. The preparation of the copious notes explaining the photographs has obviously been a labour of love to the author, and the reader cannot fail to sense and share his enthusiasm, especially in his chapter on "Variations in Cloud Colour." But it is unfortunate that the author has not confined himself to his very excellent descriptive accounts and interpretations of the illustrations, but has seen fit to provide, in an opening chapter, and here and there elsewhere, a summary of the physical processes involved in cloud formation. This is given in a series of paragraphs lacking any ordered sequence and unfortunately containing many loose statements and inaccuracies which can hardly be excused by the avowal in the Introduction that "some of the discussion may seem more dogmatic than strict scientific accuracy would warrant." The author then does not intend that the atlas should be used as a text-book, but both the meteorologist and the general reader will find much to interest them in Mr. Grant's collection of photographs and his descriptive accounts of sky phenomena. J. P.

EDUCATIONAL

Map Projections. By GEORGE P. KELLAWAY, B.SC., F.R.G.S. $8\frac{1}{2}\times5\frac{1}{2}$. Pp. viii+127. 75 diagrams. London: Methuen and Co. Ltd., 1946. 10*s* 6*d*.

The aim of this little text-book is best indicated by the author's own claim that "the syllabuses . . . of the Higher School Certificate . . . are adequately covered by Pts. I and III, while the whole book should prove sufficient . . . for the University Degree." Projections are classified in such a way as to present a logical sequence, and attention is devoted to those which are commonly used, omitting consideration of those which are only of theoretical

interest. No mention is made of recent (mostly American) projections which, though often novel to the point of eccentricity and not all likely to win a place for themselves in current use, do at least stimulate thought and refuse to accept the classic projections as final.

The author claims to have kept mathematics to a minimum, but, while this is true of the standard, in the reviewer's opinion a quite unnecessarily large amount is involved. Almost two pages of mathematical discussion, involving three tables of figures, are invoked to demonstrate that scale is exaggerated outwards from the centre of the gnomonic, a property that is at once evident from the diagram illustrating its construction. The same is true to a greater or less extent of the discussion of properties of most of the projections which can be drawn by a perfectly simple and obvious geometrical method. It is this insistence on introducing mathematics that is more likely to disconcert non-mathematical students than the actual calculations, which are in themselves simple. The section on conics suffers perhaps most in this respect. Again, while the author rightly insists on the conception of a 'generating' globe, he leaves this quite general as to size, so involving unnecessary complications (*e.g.* circular measure for arcs), whereas by giving the globe a definite scale, as the student must in practice, the mathematics could usually be reduced to arithmetic.

While unlikely to supersede existing text-books, this little work undoubtedly has value if only for its weeding out of useless projections and for the logical order in which the subject is covered. R. M.

A Short Geography of Lincolnshire. By S. B. Vickers, B.Sc., A.C.P.. Foreword by J. W. Twidale. Preface to the second edition by F. J. Birkbeck, M.A. 8×5½. Pp. 72. 17 photographs. 11 sketch maps and diagrams. London : A. Brown and Sons Ltd., 1946. 1*s* 8*d*.

This elementary text-book, written for Lincolnshire school children, has the outstanding merit that it is designed to introduce them to geography by a study of their local surroundings. The familiar environment is related to general principles of physical and human geography, and, if in the process the regional concept of Lincolnshire is apt to suffer, the attempt to combine the two approaches is worth the attention of teachers in counties other than Lincolnshire. B. D. B.

GENERAL

From Savagery to Civilization. By Grahame Clark. 7½×5. Pp. x+112. 24 text figures. 4 plates. Past and Present, Vol. 1. London : Cobbett Press, 1946. 7*s* 6*d*.

This, the first volume in a new series designed to show how history can help, is an introduction to the study of man's passage from the most primitive conditions to the beginnings of civilisation. It contains an excellent bibliography. There is a generous supply of useful illustrations and tables. For many readers perhaps one more table would have been welcome, one giving a summary view of the accepted geological ages, so far as these are referred to in the text. The book abounds in neat working definitions : man differs from the animals by his culture ; culture is his control of his environment ; civilisation is the culture of cities. The learned author rejects the old assumption that mankind as a whole passed through a special pastoral phase on the way from hunting and fruit gathering to a settled life. And among the numerous topics touched upon—after all, it is a small book—is the rôle of war, part cause and part result of man's technical development, and the desperate need of our time to control the applications of science. R. T. C.

Man, Nature and Time : An Introduction to World Study. By William Alexander Gauld. 7½×5. Pp. x+291. 12 figs. London : G. Bell and Sons Ltd., 1946. 10*s* 6*d*.

The third part of this book is a broad review of the external relations of sovereign states both to each other and to their dependencies and of the extent to which these relations have led to the growth of world organisation. How far the tension between the forces of separatism and of world unity is being resolved cannot be determined, but the author's view appears to err on the side of optimism, especially in the light of some far-reaching developments since the book was written. This is not meant to belittle the author's theme but rather to emphasise the complexity of the pattern of world life and the difficulty of assessing the value and strength of particular threads in its texture.

The theme is developed in the first and second parts, and may be summarised as the importance of the time factor in geographical influence. The geographical setting of any particular culture is not static and the nature of its effect depends on the use man has made of his opportunities, so that at any specified time the environment of a group, a community or a state is an historico-geographical synthesis—a synthesis that is continually absorbing into itself new elements.

There is nothing new in this approach to world study, but at a time when political, social and economic relations are rapidly changing, the author has done a useful service in focussing attention on the complex background of man's activities. S. C. F.

Géographie de la Circulation sur les Continents. By ROBERT CAPOT-REY. 9×5½. Pp. 296. 5 figs. 32 plates. Map. 221 references. (Géographie Humaine, ed. by Pierre Deffontaine, No. 20.) Paris : Librairie Gallimard, 1946.

This is an interesting essay in human geography : the manifold problems of movement over the face of the earth are studied less with consideration for the things transported than for the ways and means of transport and the association of these with the distribution and activities of mankind. The author is professor of geography in Algiers, and his special competence is with the Saar Basin and with the Sahara, but material for this work is drawn from every clime and country. The bibliography runs to many pages. There is but one map ; the lack of more is excusable, for only an atlas of the world would have sufficed. The pictorial illustrations, mostly photogravure, are excellent.

As it would have been impossible to treat the whole subject in one volume, only land routes are reviewed. The avowed purpose is to explain the localisation of the facts : roads and tracks of every kind and their connection with modes of life, nomad and sedentary ; means of transport, vehicles, and their adaptation to environment ; the migration and settlement of peoples as affected by those two factors, the growth of cities, the desertion of the countryside, the colonisation of new lands. One of the most striking characteristic of tracks is their permanence : " la route est un palimpseste où les inscriptions des différentes époques se superposent sans s'effacer," and the emphasis is here upon the human element and its share in modifying circumstances that might seem to have been determined by nature, " et l'homme n'a pas dit son dernier mot."

The book is full of information with often unexpected sidelights and illustrations. It is well ordered and very readable. R. T. C.

Crop Production and Environment. By R. O. WHYTE. 8¾×5⅝. Pp. 372. 53 figs. 32 plates. Bibliography. London : Faber and Faber Ltd., 1946. 25*s*.

In his preface the author remarks : " The writing of these chapters has been like acting as a reporter at a shadow conference at which plant scientists past and present have mingled with weather-wise farmers, gardeners with green fingers and cultivators of all manner of crops in every cultivable latitude." The voice of the latter group is barely heard, for the book is an account of research, particularly research on the effect on plants of light and temperature. The work described is modern and the book is a good introduction to that work. But there is too much of the card-index, for one gets a series of précis that are necessarily discontinuous and repetitive. To be entirely useful, the number of researches described might be reduced and the element of synthesis increased. It is true that such synthesis must at present be partial and provisional, for the field is new, the technique still in the making and the underlying philosophy immature ; but synthesis there must be, otherwise no valuation of past progress nor guide for the future. Nothing, however, can take away from the value of the book as a work of reference. The documentation of Russian work is particularly valuable.

The price seems high, considering the style of the book. W. B.

Water Transport : Origins and Early Evolution. By JAMES HORNELL, F.L.S., F.R.A.I. 9½×6¾. Pp. xv+307. 69 figs. 87 photographs. Map. Cambridge : University Press, 1946. 30*s*.

Mr. Hornell has been closely associated with fisheries in many parts of the world and has collected a vast amount of first-hand information about all kinds of water transport. Since his retirement from service with the Madras Government as Director of Fisheries, he has devoted his life to further study of this subject to such effect that his book contains a truly amazing mass of historical and practical information relative to all sorts of craft of a more or less primitive nature. The practical details could only have been supplied by one who is intimately conversant with the actual craft themselves.

The contents are divided into three distinct groups :—floats, rafts and kindred craft ; skin boats, which include coracles, curraghs, kayaks and their kin ; and bark canoes, dug-outs and plank-built craft. Transport by means of inflated skins of sheep, goats, oxen, etc., is still in vogue in many parts of the globe ; likewise the use by native fishermen of earthenware pots as floats for support. The information relating to the history and use of coracles and curraghs in Great Britain and Ireland is interesting, and details of the construction of these craft are given in full. Eskimo kayaks and umiaks are included in this section and much detailed information supplied. The final section deals with the true boat-types from the dugout canoe to the Arab sambuk and zarak with the usual details of construction, together with a history of the development from the ancient Egyptian ship and the Viking ship. This section concludes with a chapter on the use of the oculus on the bows of various craft, and describes various dedication and launching ceremonies in use throughout the ages.

The work is well illustrated by sketches of the different types of craft and their construction, together with a number of excellent photographs. It is a valuable work of reference and represents an enormous amount of painstaking enquiry on the part of the author.

W. A. F.

Henry the Navigator. By ELAINE SANCEAU. 8½×5½. Pp. 144. Frontispiece. End-paper map. London : Hutchinson and Co. (Publishers) Ltd., N.D. 16*s*.

This is a stimulating account of that 'Navigator' who was not so much a navigator himself as the cause of navigation by others and, in fact, the prime mover in the great movement of geographical discovery in the 15th, 16th and subsequent centuries : for the result of his labours went on long after his death, and have been a potent factor in the shaping of the modern world.

The author does not claim to have brought to light new sources of information ; but she, equally at home in Portuguese and English, and with the published authorities at her finger-ends, has presented the material in a most readable form and thrown much light on her hero and his historical background. He was reticent about himself, and remains, when all is said, an enigmatic figure.

The book is not annotated, a fact which will please some readers but be regretted by others who might wish to refer to the sources of salient statements. The author, however, assures us that all conversations are translated from Zurara and the other chroniclers. There is a useful chronological table and a bibliography showing on what wide reading the book is based. Reproductions of contemporary maps would have been welcome. It is a pity that the end-paper map of Portugal and North West Africa does not reach south to the limit of discoveries in Guinea made in the Infante's lifetime. H. C. M.

The Road of a Naturalist. By DONALD CULROSS PEATTIE. 8½×5½. Pp. 220. Wood engravings by Paul Landacre. London : Robert Hale Ltd., 1946. 12*s* 6*d*.

In this slim volume of seventeen collected articles, Mr. Peattie shows himself to be that unusual growth amongst natural historians, a scientist who is also a poet. His accurate observation of nature is expressed in the language and with the imagination of a poet, but is no less true to science. Though he began his professional career as a botanist, he is almost equally at home amongst birds and animals. To his rambles far afield over the deserts, swamps and forests of North America he has added much of human interest, for his own autobiography is delicately interlaced through the trellis-work of his book, which is one to delight all nature lovers. There are numerous clever woodcuts of birds, animals, flowers and trees. I. W. H.

Glimpses of a Governor's Life. By Sir HESKETH BELL, G.C.M.G. 8¾×5⅝. Pp. xi+212. 4 illustrations. London : Sampson Low, Marston and Co. Ltd., N.D. 12*s* 6*d*.

Sir Hesketh Bell has behind him twenty-five years of service as Governor and Administrator in the New World and the Old, and these 'glimpses' cover the first decade (1899-1909) which saw him in Dominica and Uganda. In Dominica he found an old and moribund colony, probably too small ever to make a satisfactory administrative and economic unit. To this, Uganda—a vast territory then in the first stage of development—presented a complete contrast, and readers will probably consider this the more interesting section. Sir Hesketh Bell's book is full of information, and is concerned with the problems he had to handle rather than with personalities, thereby increasing its interest to the geographer. He repeatedly bears out the need for greater continuity of policy in the administration of the individual colonies.

A sketch map of Uganda would be a useful addition to this publication. We hope that the author will favour us with further 'glimpses' of his service. C. R. V. G.

Adventurous Life. By Admiral LORD MOUNTEVANS, K.C.B., D.S.O., LL.D. 9×6. Pp. 259. 32 illustrations. London : Hutchinson and Co. (Publishers) Ltd., N.D. 20*s*.

Admiral Mountevans has written a lively and discursive book, beginning with the escapades of boyhood, and including adventures in the Antarctic and during two world wars. The book is full of the zest for living and a certain ingenuousness in places, but never harps on complaint or grievance. The story of the last supporting party to Scott's polar journey is very briefly told ; more attention is given to the admiral's notable work with destroyers, and perhaps too much to the trivialities of the formal and social rounds of the Australia station. Taken all round, it is a book to commend and enjoy, and should entertain a wide circle of readers, old and young. R. N. R. B.

Rock Climbing and Mountaineering. By C. BRUNNING. 7½×5. Pp. 87. 35 figs. London : Faber and Faber Ltd., 1946. 5*s*.

This is a short technical book on rock climbing and mountaineering for the novice. The author deals with equipment and technique concisely but adequately. It is fully illustrated with excellent diagrams, and though we viewed it in a critical manner, we found no matters of importance on which we differed from the author. Mr. Brunning makes a wise distinction between rock climbing and mountaineering. He deals shortly with the various climbing and mountaineering districts in the United Kingdom. A. H.

PUBLICATIONS RECEIVED

The Theory and Practice of Geography. An Inaugural Address delivered at Liverpool on February 7, 1946, by H. C. DARBY. 7½×5. Pp. 22. Liverpool : The University Press ; London : Hodder and Stoughton Ltd., 1946. 1*s.*

Geography of an Air Age. By E. G. R. TAYLOR. 7¼×5. Pp. 55. 7 figs. "Looking Forward" Pamphlets, No. 4. London : Royal Institute of International Affairs, 1945. 1*s.*

European Transport : The Way to Unity. A Report prepared for a Committee of the Fabian International Bureau by M. ZWALF. Foreword by Leonard Woolf. 8½×5½. Pp. 39. London : Fabian Publications Ltd. and Victor Gollancz Ltd., 1946. 2*s.*

The Exploration for Oil in Great Britain and Its Economic Consequences. By G. M. LEES, M.C., D.F.C., PH.D., F.G.S. Demy 8vo. Pp. 10. Fifteenth Abbott Memorial Lecture. Nottingham : University College, 1946. 1*s.*

Rockall : Its Past and Future. By JAMES A. MACINTOSH. 7½×4¾. Pp. 32. 2 sketches. Oban : Hugh Macdonald Ltd., 1946. 2*s.*

The Geology of the Foyers "Granite" and the Surrounding Country. By DAPHNE D. C. POCHIN MOULD. Reprinted from the *Geological Magazine*, 1946, 83 (6) : 249-265. 2 photographs. 2 maps. Section.

Old Elgin. 9×6½. Pp. 28. 21 photographs. Map. Elgin: The Elgin Society, 1945. 2*s* 6*d.*

Early Scottish Colliery Wagonways. Part One. By GEORGE DOTT. Colliery Engineering, 1940, pp. 77-80, 89. 5 figs.

A Comprehensive Study of Local Place Names. By W. S. ROBSON. 9¾×7¼. Pp. 22, 32. Reprinted from the Transactions of Hawick Archaeological Society, 1945 and 1946.

The Northern Industrial Group : Objects, Organization and Methods. 9¾×6. Pp. 8. Diagram. Newcastle-upon-Tyne : The Northern Industrial Group, N.D.

Water Supplies. By A. A. L. CAESAR. 9½×6. Pp. 12. Newcastle-upon-Tyne : North-East Development Association, Publication No. 1, 1946.

The Northern Region : Northumberland, Durham and North Riding. 9½×6. Pp. 19. Map. Newcastle-upon-Tyne : North-East Development Association, Publication No. 2, 1946.

Land Utilization in the District of 24-Parganas, Bengal. By S. P. CHATTERJEE, M.SC., PH.D., D.LITT. Reprinted from *B.C. Law Volume*, Part II. Calcutta Geographical Society, Publication No. 6, 1946 : 342-408. 25 figs. 22 plates.

Survey of the Anglo-Egyptian Sudan, 1898-1944. By K. D. D. HENDERSON. Introductory historical note by E. N. Corbyn. 7¼×5. Pp. 59. 24 photographs. End-paper maps. London : Longmans, Green and Co. Ltd., 1946. 1*s.*

Livingstone's Last Journey. By Sir REGINALD COUPLAND, K.C.M.G., C.I.E., HON. D.LITT. 8¾×5⅝. Pp. 271. Frontispiece. 5 maps. London : William Collins, Sons and Co. Ltd., 1945. 12*s* 6*d.*

The Forage Resources of Latin America : Peru. By HUGO W. ALBERTS. 10×7½. Pp. 24. Sketch map. Bulletin 37 of the Imperial Bureau of Pastures and Forage Crops, Aberystwyth, prepared in association with the Technical Collaboration Branch, Office of Foreign Agricultural Relations, United States Department of Agriculture. Aberystwyth : Imperial Agricultural Bureaux, 1947. 2*s* 6*d.*

Statistical Register of Western Australia for 1942-43. Compiled from Official Records by R. J. LITTLE, Acting Government Statistician. 9½×6. XII Parts, and Statistical View of One Hundred and Fourteen Years' Progress in Western Australia, 1829 to 1942-43. Perth, W.A. : Robert H. Miller, Government Printer, 1946.

The New Zealand Official Year-Book, 1945. Fifty-third issue, compiled in the Census and Statistics Department of the Dominion of New Zealand. 9½×6. Pp. x+776. Map. Wellington, N.Z. : E. V. Paul, Government Printer, 1945. 7*s* 6*d.*

MAPS RECEIVED

Gazetteer of Great Britain giving the position of Towns and Important Villages shown on Ordnance Survey Maps in terms of The National Grid. 9½×6. Pp. 54. Index to the Ordnance Survey of England and Wales, One Inch to One Mile New Popular Edition, also the Quarter-Inch Fourth Edition (1 : 2,000,000). Index to the Ordnance Survey of Scotland, One-Inch Popular and Quarter-Inch Sheets (1 : 1,900,800). Chessington : Director General, Ordnance Survey Office, 1946. 5*s.*

Land Utilisation Map of Scotland, based on the "One-Inch" Ordnance Map. Sheets: 75. Dunbar and Lammermuir. 79. Lanark. 80. Peebles and Galashiels. 84. Nithsdale and Moffat. 85. Hawick and Eskdale. London: The Land Utilisation Survey of Britain. Per sheet folded: 5*s*.

Great Britain: Types of Farming. Sheet 1. Compiled by the LAND UTILISATION SURVEY OF BRITAIN and the DEPARTMENT OF AGRICULTURE FOR SCOTLAND. Scale: 1 : 625,000. National Grid. Printed in colour. Southampton: Director General, Ordnance Survey, 1944. 5*s*. *Explanatory Bulletin*. By L. DUDLEY STAMP. 11×8½. Pp. 20. 2 maps (1 : 2,500,000). London: Geographical Publications Ltd., for the Land Utilisation Survey of Britain, N.D. 1*s*.

TRAVELLING FELLOWSHIP IN GEOGRAPHICAL RESEARCH

The Council of the Royal Geographical Society invites applications for the above Fellowship open to University graduates and others wishing to undertake geographical research outside the British Isles.

The Fellowship will be tenable for a period of not less than three months and not more than one year, the stipend being at the rate of £500 per annum. Holders of the Fellowship are not excluded from applying elsewhere for additional assistance towards travelling expenses.

Applicants are requested to submit to the Director and Secretary of the Royal Geographical Society, Kensington Gore, London, S.W.7, not later than June 1, 1947, particulars of their qualifications, a scheme of research and a statement as to how it is proposed that the grant should be spent. The names of two referees are also required.

The Council expects that normally the results of a candidate's investigations will be communicated to the Royal Geographical Society.

ROYAL SCOTTISH GEOGRAPHICAL SOCIETY

PROCEEDINGS

MEETINGS OF COUNCIL were held on December 17, 1946, and January 21 and February 25, 1947.

Obituary.—The late CHARLES B. BOOG WATSON, F.R.S.E., joined the Society in 1906. He was elected a Member of Council in 1927 and a Vice-President in 1936. His great interest lay in Old Edinburgh — its history, its buildings, the old civic life, and its antiquities. His early scientific training gave him an exact mind and a scholarly approach to the many problems he investigated. He collaborated in the preparation of numerous works of reference, including the Early Maps of Scotland and other publications.

Miss MAUDE NEWBIGIN, M.A., was a Member of Council during the years 1944 to 1946. She belonged to a gifted family, and was a sister of Marion Newbigin. Miss Maude Newbigin was one of the first seven women graduates of Edinburgh University.

Honorary Membership.—Sir D'ARCY W. THOMPSON was elected an Honorary Member of the Society.

The Honorary Membership and Fellowship was conferred on Professor L. S. BERG, President of the Geographical Society of the U.S.S.R.

SPECIAL LECTURE

At a Meeting held in the Society's Rooms on April 15, 1947, a paper was read by R. MACLAGAN GORRIE, D.SC., of the Indian Forest Service, on "Shelter Belts as a Contribution to Scottish Reconstruction." Professor Alan G. Ogilvie, O.B.E., M.A., B.SC., President of the Society, was Chairman. Colonel Dalyell of the Binns, Dr. R. Miller, Dr. Snodgrass, Mr. Charles (Central and S.E. Scotland Planning), Mr. Manson (Department of Agriculture), and Dr. A. Geddes took part in the Discussion, and all indicated their appreciation of the need for action and of the value of the lecturer's contribution. In conclusion, the President thanked Dr. Gorrie for his paper and his answers to questions.

[The lecture differed substantially in its approach from the article on pp. 11-16.]

NOTICE

THE SCOTTISH GEOGRAPHICAL MAGAZINE.—Owing to the increased demand, both at home and overseas, for entire sets of the Magazine, it is desirable to complete a number of sets by obtaining issues which are now out of stock.

Will Members who are able to spare any copies, especially of numbers issued since 1938, very kindly forward them to the Secretary.